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A GRAPHIC SUMMARY OF AMERICAN AGRICULTURE

BASED LARGELY ON THE CENSUS OF 1920

BY

O. E. BAKER, *Agricultural Economist*
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THIS publication is a revision and enlargement of "A Graphic Summary of American Agriculture" contained in the 1915 Yearbook of the Department of Agriculture, pages 329–403, and which was also issued as Yearbook Separate 681. That publication was based largely on the 1910 census of agriculture, while this revision portrays similarly the returns from the 1920 census.

A comparison of the maps in this revision with those contained in the previous edition will reveal several significant shifts in crop production, notably the partial replacement of corn by wheat in eastern Kansas and Oklahoma, and of cotton by velvet beans and other crops in southern Alabama and Georgia and in northern Florida. The increase of improved land in the Northern Great Plains Region and the nation-wide increase in the nominal value of land, especially marked in the Corn Belt, also deserve notice.

Several new items were included in the 1920 census, notably silage crops, corn cut for forage, annual legume hay, velvet beans, purebred live stock, and farm facilities. Maps visualizing these statistics appear in this revision, and several maps relating to the size, value, ownership, and tenancy of farms have been added.

This revision also includes a series of maps showing, in the most general way, the topography, rainfall, length of frost-free season, soils, and native vegetation. These physical factors exert a dominant influence in directing agricultural development, and explain in large measure the geographic distribution of the crops and live stock.

The author wishes to acknowledge the valued assistance and advice of R. G. Hainsworth and E. A. Dacey in drafting the maps and graphs.

A GRAPHIC SUMMARY OF AMERICAN AGRICULTURE

BASED LARGELY ON THE CENSUS OF 1920

By O. E. Baker, *Agricultural Economist, Bureau of Agricultural Economics.*

Introduction.

FOUR COUNTRIES are preeminent in quantity of agricultural production—the United States, Russia, China, and India—and at present the production of the United States is considerably greater than that of any other nation. The aggregate value (United States value) of the agricultural products of the Russian Empire just prior to the war was only about two-thirds that of our Nation, while the production of foods and fibers in China, which can only be guessed at, is probably also about two-thirds and certainly not over three-fourths that of the United States. The agricultural production in India is less than half that of our Nation. Only the British commonwealth of nations as a whole—India, Australia, New Zealand, South Africa, Canada, and the British Isles—approaches the United States in quantity of agricultural production, with an aggregate about nine-tenths that of the United States.

The United States is not only the leading nation in agricultural production, but also it leads all nations in exports of agricultural products. The teeming populations of China and India require practically all the food produced and most of the fiber for home consumption, but in normal times Russia has ranked with the United States in value of agricultural exports. War, revolution, and crop failure, however, have transformed Russia into a nation unable to feed its own people. Since the war the value of agricultural exports from the United States has exceeded the aggregate value of those from all other nations in the world. Yet the agricultural exports of the United States at present are only one-eighth of its production.

This vast agricultural production of the United States requires the labor of about one-quarter of our gainfully employed population, whereas 85 per cent of the population of Russia is classed as agricultural, and probably three-fourths of the people of China and of India derive their support from agricultural pursuits. Six and a half million farmers in the United States, assisted by a somewhat

smaller number of farm laborers, probably less than 4 per cent of the farmers and farm laborers of the world, produce nearly 70 per cent of the world's corn, 60 per cent of the world's cotton, 50 per cent of the world's tobacco, about 25 per cent of the world's oats and hay, 20 per cent of the world's wheat and flaxseed, 13 per cent of the world's barley, 7 per cent of the world's potatoes, and 5 per cent of the world's sugar, but only about 2 per cent of the world's rye and rice. Totaling the cereals on the basis of tons, and estimating the production of China as somewhat larger than that of India, it appears that the United States produces about one-fourth of the world's cereal crops. The average production of cereals per person engaged in agriculture in the United States is 12 tons, while for the rest of the world it is only about 1.4 tons.

Nevertheless, the agricultural production of the United States is no longer keeping pace with our increasing population. The peak of production per capita of the total population was reached about 1906 or 1907, and although the decrease in per capita production since has been very slow and is yet very small, it is clearly apparent. This failure of agricultural production to increase as rapidly as population is not due primarily to the decrease in the proportion of our population engaged in agriculture from over 13 per cent in 1910 to about 10 per cent in 1920, according to the census returns[1], for the acreage of crops per person engaged in agriculture was, apparently, 25 per cent greater in 1920 than in 1910; but, instead, is owing mostly to a notable decrease in the rate of expansion of our arable area. Improved land increased only 5 per cent from 1910 to 1920, as compared with 15 to 50 per cent in previous decades, and this 5 per cent increase was practically confined to the precariously productive semi-arid lands of the Great Plains region. The land in the United States suitable for agricultural use without irrigation, drainage, or heavy fertilization is nearly all occupied. Consequently, one of the great questions before the American people is how to maintain the supply of foods and fibers for the increasing population at that high level to which we are accustomed,—should we cultivate the present area of arable land more intensively, or, like England, depend upon imports from foreign countries, or should the Nation embark upon extensive projects of reclamation?

The first part of this Graphic Summary of American Agriculture, therefore, is devoted to a series of maps visualizing in a very generalized way the agricultural regions of the United States, and the

[1] However, as the 1920 census was taken January 1 and the 1910 census was taken April 15, it appears likely that a large number of farm laborers were missed by the enumerators in 1920. Making allowance for this discrepancy, it seems probable that the acres of crops per person engaged in agriculture increased at least one-sixth between 1910 and 1920, and the production even more.

topographic, climatic, and soil conditions which determine these regions; also the location and extent of the land available for reclamation by irrigation, by drainage, and by clearing of forest growth. This first part is concluded by two graphs, one outlining the trend of land utilization in the past, and the other venturing to set limits to the expansion of our arable area in the future. (See Figs. 2 to 18.)

The second part of this study shows the geographic distribution of 50 crops in the United States, according to the census of 1920. For corn, wheat, and cotton both acreage and production are shown; but for other crops acreage only, since acreage affords a better comparison than production of the relative importance of the crops in a region. The total area in crops in 1919 was about 370 million acres, an increase of 50 million acres since 1909. This increase of 13 per cent in crop acreage, as compared with 5 per cent in improved land, indicates that patriotic motives, supported by the high prices paid for farm products during the war and for some time afterward, caused the plowing up and planting to crops of much improved pasture. The trend of land utilization in the United States is toward the more intensive use of the more fertile or favorably situated land—that is, its use for crops; and toward the less intensive utilization of the less fertile or less favorably situated land—that is, its use for pasture and forest. (See Figs. 19 to 71.)

The third part of this article consists of a series of 24 maps showing the geographic distribution of the several kinds of live stock, total and purebred only; also of the production of butter and cheese, wool and mohair. Fully three-fifths of the crop acreage in the United States is used to produce feed for farm animals, or about 225 million acres; and, in addition, our live stock consume the product of about 65 million acres of improved pasture, probably of 150 million acres of unimproved grassland pasture in farms, and 175 million acres of woodland pasture in farms and in our national forests, besides that of perhaps 500 million acres of arid or semiarid open range land in the West. It seems safe to say that live stock consume two-thirds of the product of the improved land and practically all the product of the unimproved pasture, or fully 80 per cent of the total food and feed produced by tame and wild vegetation in the United States. (See Figs. 72 to 96.)

The last part of this study considers the farm as a whole—the variations in size and value in different portions of the United States; the expenditures for labor, feed, and fertilizer; ownership and tenancy; and, finally, the geographic distribution of country, village, and city populations. Four small maps also are provided, showing the number of farmers having automobiles, tractors, telephones, and running water in the house, as reported by the census

for January 1, 1920. American farms, in general, are different from those in other countries of the world, except Canada, Australia, and South Africa. English farms differ from American farms in that they are nearly all operated by tenants and employ more hand labor. The peasant farms of continental Europe utilize agricultural machinery still less and are much smaller in size than most American farms. The farms of India, China, and Japan are still smaller and are cultivated with only the crudest tools. There are 28 to 30 acres of crops per person employed in agriculture in the United States, as compared with 9 in Russia prior to the war, 7 in France and Germany, and 1½ in Japan. (See Figs. 97 to 124.)

The American farm involves a large investment of capital. This investment is increasing and must increase if the American farmer is to improve his standard of living. The average value of farms in the United States was $6,444 in 1910, and $12,084 in 1920. In Iowa, the average value of the farms in 1920 was $39,941. The area of the crops per farm in the United States increased from 50 acres in 1909 to 57 acres in 1919. Our farmers are driving larger teams, using more efficient machinery, producing more per acre and per person than ever before. Each American farmer and farm laborer, on the average, is feeding nine people other than himself in this country, and one more person living in foreign lands. It is in this increasing productivity of the American farm, amounting probably to 15 per cent in the last decade, that the expenditure for scientific research, for technical education, and for improved economic organization in agriculture finds its justification.

This semicapitalistic American farm, however, is not organized like a factory. The one farm laborer per farm, on the average, is often the farmer's son, or a neighbor's, who eats at the same table with the farmer and expects some time to have a farm of his own. Corporate or communal agriculture is, in general, a failure in the United States. The family farm is practically the universal type. To keep this American farm large enough to support a family according to the American standard of living and supplied with sufficient machinery and working capital for efficient operation is important not alone to our agricultural but also to our national welfare. The characteristic and precious feature of American agriculture is its large production per man, and during the past decade the increase in the productivity of our farms was greater than in any decade preceding. But as population increases and poorer and poorer land is brought into use for crops—that is, as labor becomes more abundant and land becomes scarcer—it appears probable that larger production per acre will become more profitable than greater production per man, and that our agriculture, as well as our standard of living, will more and more resemble that of Europe before the war.

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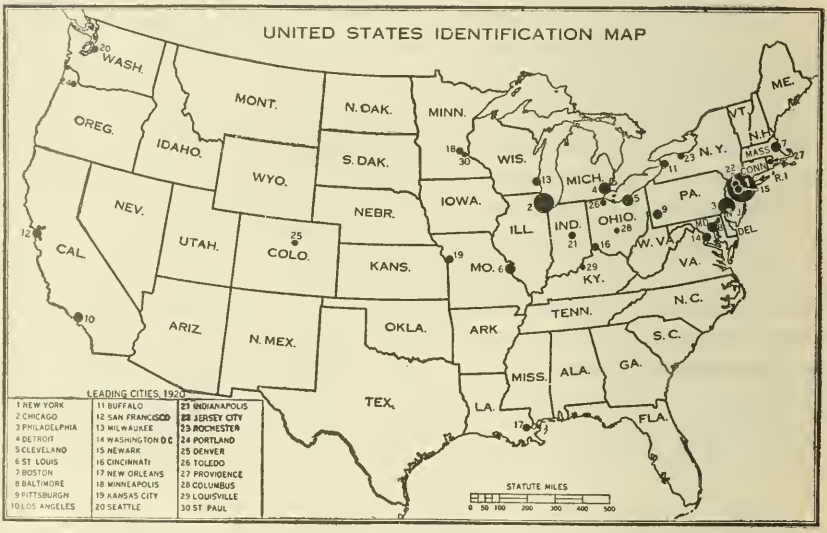


Fig. 1.—This map should be used in connection with all the maps that follow when it is desired to determine the name of a State. The succeeding maps do not show State names, because the letters would interfere with the dots or shading, but the State boundaries are shown and the shape of these boundaries, or location of the State on the map, should be compared with this map to identify the State. The map also shows the location of the 30 largest cities, the names corresponding to the numbers being given in the lower left-hand corner of the map.

The Agricultural Regions.

The United States may be divided into an eastern and a western half, characterized, broadly speaking, one by a sufficient and the other by an insufficient amount of rainfall for the successful production of crops by ordinary farming methods. The North Pacific coast and several districts in California and in the northern Rocky Mountain region constitute exceptions to this statement. The transition zone which separates the East from the West lies, in general, along the one hundredth meridian, the average annual precipitation increasing in this zone from about 15 inches at the Canadian boundary to 25 inches in southern Texas, where the evaporation is much greater and the rainfall more torrential. The East is a region of humid climate farming, based upon tilled crops, small grains, and tame hay and pasture; the West, of wild hay and grazing, dry farming, winter crops in certain localities, and irrigation farming, with only limited areas of ordinary farming under humid conditions such as characterize the East.

The East and West may each be divided into six agricultural regions. In the East, precipitation being usually sufficient, the classification is based largely on temperature and the crops grown, while in the West rainfall and topography are the important factors. In the East the agricultural regions extend for the most part east and west, following parallels of latitude; while in the West the regions are determined by the mountain ranges and extend north and south. Agriculture in the East varies primarily with latitude and soils, but in the West the principal factors are altitude and rainfall. The average elevation of the eastern half of the United States is less than 1,000 feet; that of the western half, over 4,000 feet. (Compare Fig. 2 with Figs. 3 to 16.)

In the East corn is the leading crop, constituting over one-quarter of the acreage and nearly 30 per cent of the value of all crops. It is grown in all the six eastern regions, but is dominant in the Corn Belt, and is very important in the Corn and Winter Wheat Region, and in the Cotton Belt. Along the Gulf of Mexico and the southern Atlantic coast the type of agriculture varies greatly from section to section—from rice farming to sugar cane growing and winter vegetable production, citrus fruit orcharding, and cattle ranching—so that the region is not named after any crop, but is called the "Subtropical Coast," because the warm water exerts a controlling influence upon climate and crops. In this eastern half of the United States there is scarcely any cotton grown outside the Cotton Belt, very little winter wheat outside the Corn and Winter Wheat Region and adjacent portions of the Corn Belt and Cotton Belt, and prac-

tically no spring wheat outside the Spring Wheat Region. Grass is of greatest importance in the Hay and Pasture Region, where in nearly every county hay and pasture occupy half or more of the improved land. (Compare Fig. 2 with Figs. 21 to 71.)

In the West hay is the leading crop, contributing nearly 37 per cent of the acreage and 26 per cent of the value of all crops in 1919, and the forage obtained by grazing is probably of almost equal value. Alfalfa is the leading hay crop in the Rocky Mountain and Arid Intermountain regions, wild grasses in the Great Plains Region, and grains cut green on the Pacific coast. Wheat contributed 21 per cent of the value of all crops, oats 3 per cent, barley 3 per cent, fruit and nuts 18 per cent, potatoes 4 per cent, and other vegetables 8 per cent in these six western regions. The value of all crops in the western regions, however, constituted in 1919 only 15 per cent of the total for the United States. (Compare Fig. 2 with Fig. 21.)

The contrast between the East and West is not as pronounced in live stock as in crops, except that swine are largely confined to the East, while sheep are much more important in the West. There is a marked distinction, however, in the manner of management, the live stock in the East being fed in the barnyards or fields with shelter at night, while in the West the stock is mostly grazed on the open range. In the East, the Hay and Pasture Region is primarily a dairy area; while the Corn Belt is the center of the beef-cattle and swine industry. In the West, the sheep are generally located in the more arid and the cattle in the less arid areas; while in the North Pacific Region, with its cool, moist climate, similar to that of the Hay and Pasture Region, dairying is again the dominant live-stock industry. (Compare Fig. 2 with Figs. 74 to 96.)

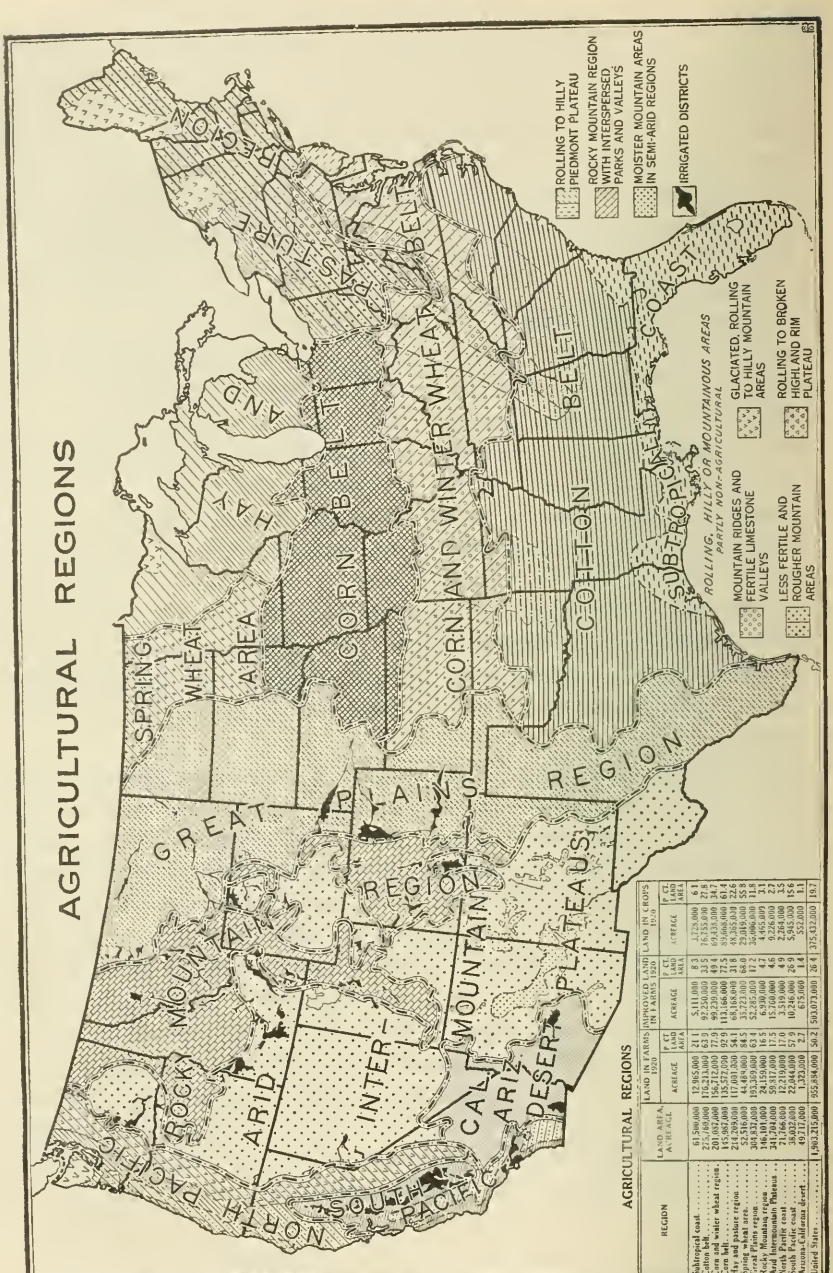
The farms, or "ranches," in the West are, in general, much larger in area than in the East. Owing to the low rainfall in the West, except in the North Pacific Region, the land outside the irrigated and dry-farming districts is used mostly for grazing, and instead of 80 or 160 acres being sufficient to support a family, as in the East, 2,000 to 4,000 acres, or more, are commonly required. In the dry-farming areas half sections of land (320 acres) and sections (640 acres) are normal size farms. In the irrigated districts the farms are no larger in area than in the East. The 80 or 120 acre irrigated farms, however, are often worth as much as the 640-acre dry farms or the 3,000-acre stock ranches. (Compare Fig. 2 with Figs. 97 to 111.)

A larger proportion of the farms in the West are operated by their owners than in the East, owing, doubtless, to the cattle ranching, the more recent homestead settlement, and the larger proportion of fruit farms. The proportion of farms operated by tenants in the western regions ranges from 13 to 23 per cent, except in the Cali-

fornia-Arizona Desert, where irrigated cotton farming increases the proportion to 33 per cent. In the East, on the other hand, over 30 per cent of the farms in the Corn and Winter Wheat Region are operated by tenants; in the Corn Belt over 40 per cent; and in the Cotton Belt over 60 per cent, owing in part to the plantation system and the large negro population. The Subtropical Coast and the Hay and Pasture regions, however, have only 27 per cent and 16 per cent, respectively, of the farms rented to tenants. (Compare Fig. 2 with Figs. 112 to 117.)

The geographic distribution of the rural and urban population is particularly interesting. The rural population is densest in the Cotton Belt, where cotton cultivation and picking require large amounts of hand labor and the acreage per laborer is small; also in the eastern portion of the Corn and Winter Wheat Region, where the rolling to hilly lands and lack of capital discourage extensive use of machinery. The rural population is much thinner in the Corn Belt and the Spring Wheat Region, and is thinnest in the West, except in the irrigated districts and the Pacific coast valleys. Urban population, on the other hand, is concentrated largely in the Hay and Pasture Region of the Northeastern and Lake States, where large manufacturing and commercial cities provide a vast market for the nation's agricultural products. (Compare Fig. 2 with Figs. 118 to 120.)

Information concerning "farm facilities," including tractors, automobiles, water piped into the house, and telephones, was collected by the census in 1920 for the first time. Tractors are found mostly in the Corn Belt, and the Spring Wheat, Great Plains, and South Pacific Regions. Over one-third of the automobiles are in the Corn Belt, where one-half to three-quarters of the farms have such vehicles. Water has been piped into the houses mostly in the Hay and Pasture Region, especially in New England, and in the South Pacific Region. Telephones are more widely distributed than any other of the farm facilities; nevertheless, the map shows a noteworthy concentration in the Corn Belt and the Hay and Pasture Regions. These "farm facilities" are criteria of rural progress and prosperity, and as such their geographic distribution is deserving of consideration. (Compare Fig. 2 with Figs. 121 to 124.)



REGION	LAND AREA, AS A WHOLE	LAND IN FARMS, 1920		IMPROVED LAND IN FARMS, 1920		LAND IN CROPS, 1919	
	ACREAGE	P. CT. LAND AREA	ACREAGE	P. CT. LAND AREA	ACREAGE	P. CT. LAND AREA	
Subtropical coast	61,500,000	12,985,000	21.1	5,111,000	8.3	4,120,000	6.1
Cotton belt	275,400,000	176,213,000	63.9	92,250,000	33.5	76,135,000	27.8
Corn and winter wheat region	201,082,000	156,212,000	77.9	99,239,000	49.4	69,435,000	34.7
Corn belt	214,200,000	186,712,000	87.2	117,693,000	54.9	90,000,000	42.0
Hay and pasture region	214,200,000	117,693,000	54.9	68,168,000	31.8	48,365,000	22.6
Spring wheat area	52,536,000	44,484,000	84.5	33,723,000	64.0	23,000,000	43.8
Great Plains region	346,800,000	143,000,000	41.2	27,000,000	7.8	23,000,000	6.6
Rocky Mountain region	346,101,000	24,159,000	16.5	6,930,000	4.7	4,465,000	3.1
Arid Intermountain Plateau	341,244,000	59,917,000	17.5	15,760,000	4.6	9,226,000	2.7
California desert	49,717,000	1,323,000	2.7	675,000	1.4	552,000	1.1
North Pacific coast	38,022,000	22,844,000	57.9	10,246,000	26.9	5,943,000	15.6
Arizona-California desert	49,717,000	1,323,000	2.7	675,000	1.4	552,000	1.1
United States	1,303,215,000	555,894,000	36.2	303,073,000	20.4	175,432,000	10.7

FIG. 2.—The United States may be divided into two parts, equal in area, the East and the West. The East has a humid climate, the West mostly an arid or semiarid climate, except the North Pacific coast and the higher altitudes in the Sierra, Cascade, and Rocky Mountains. Each of these two parts has been subdivided into six agricultural regions, characterized by distinct combinations of crops or systems of farming, the result largely of the different climatic conditions. In the East these regions, with one exception, are named after the crops; but in the West, because of the dominating influence of topography and the Pacific Ocean upon the climate and the agriculture, topographic and geographic names are used. (See pp. 7 to 9.)

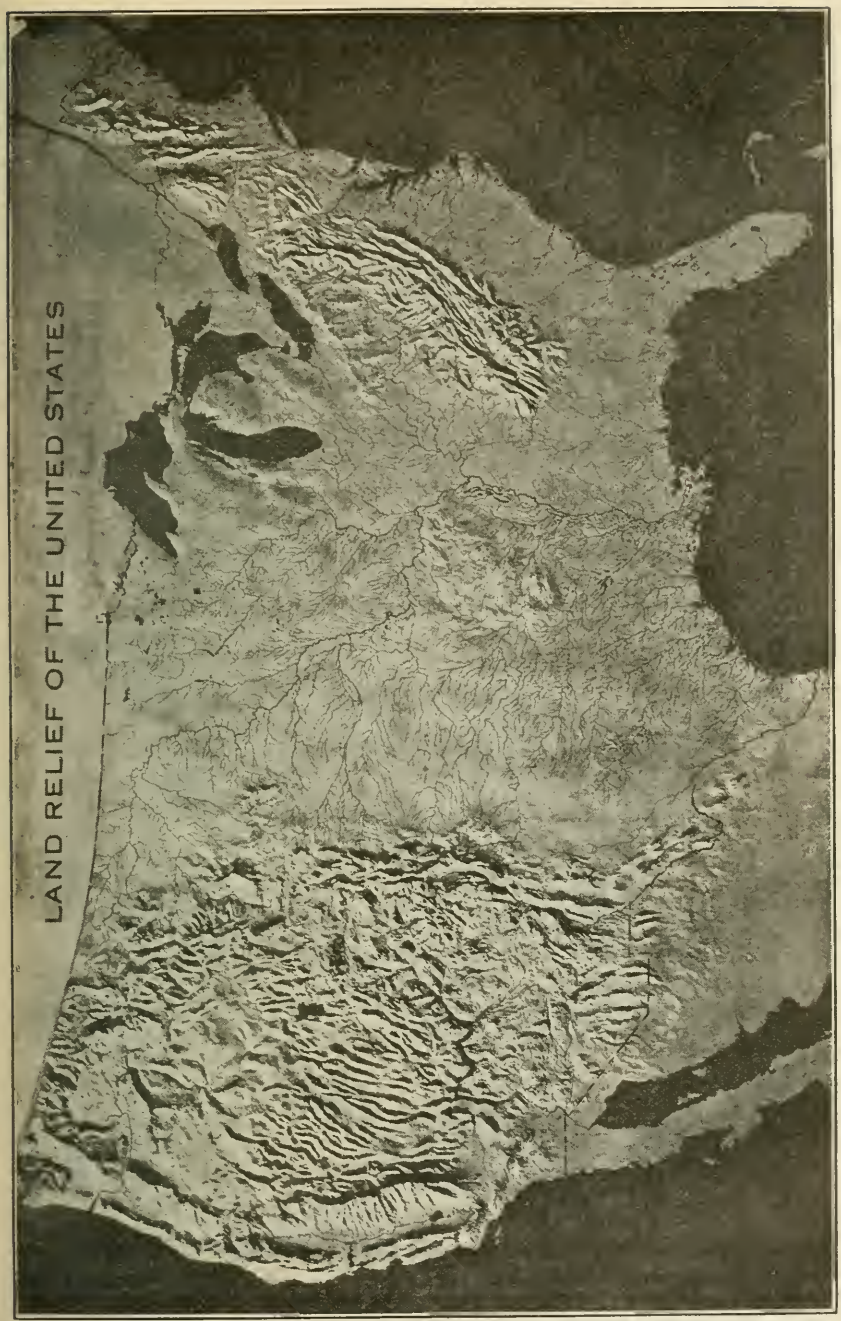
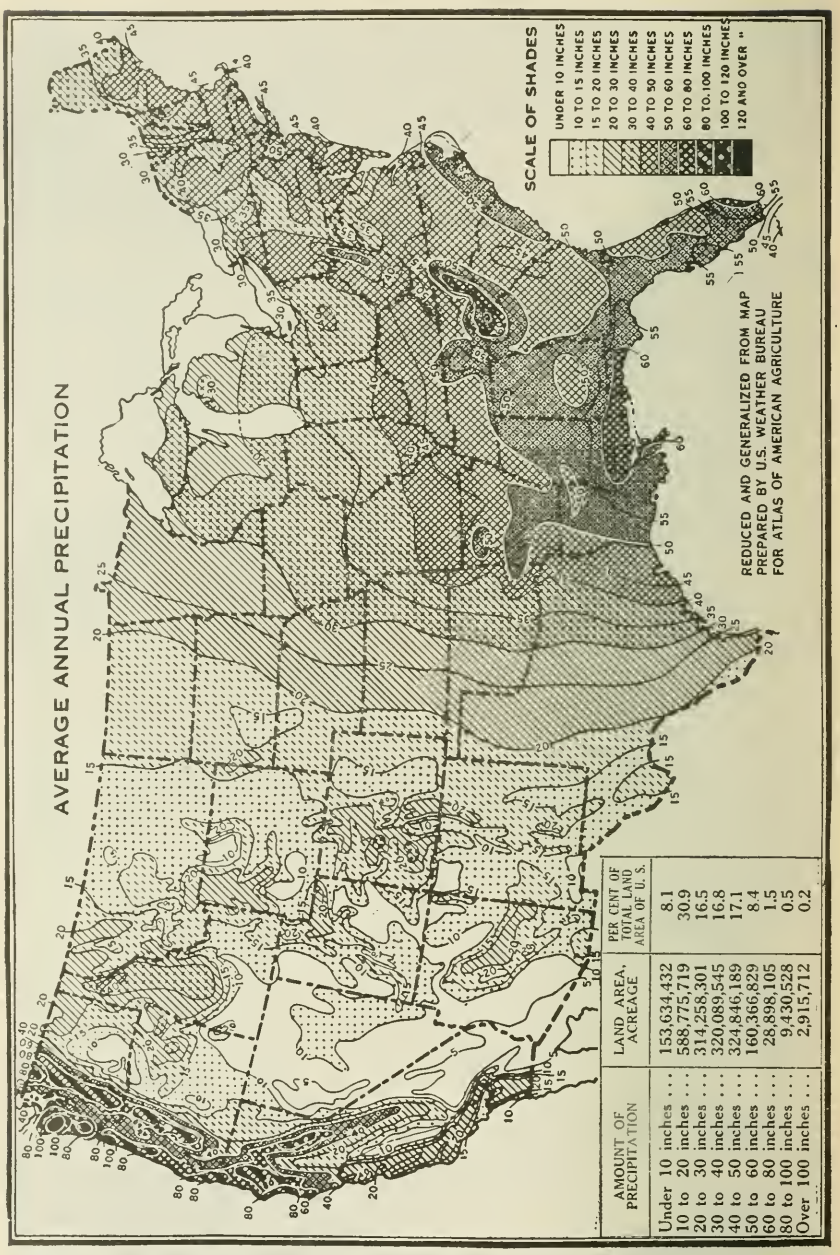
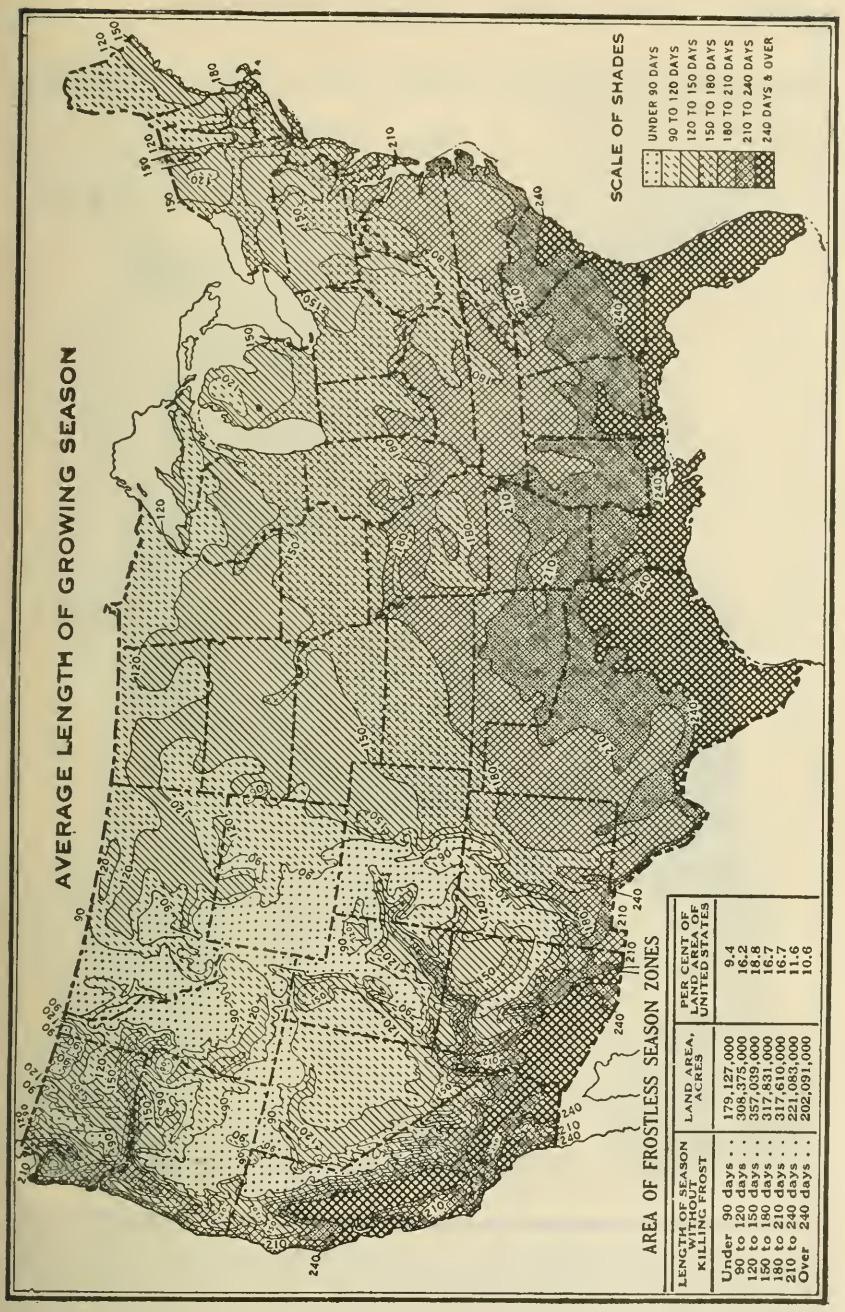


FIG. 3.—This map shows the topography of the United States in a generalized way. It is a photograph of a relief model of the United States supplied by the United States Geological Survey. The mountainous character of the West, except the Great Plains Region, is clearly shown; but the map fails to show the high altitude of much of the West, particularly of the Rocky Mountain and Arid Intermountain Plateau regions. Owing to the altitude, these regions have a much cooler climate than corresponding latitudes in the East. The vast expanse of the Mississippi Valley, with its level to rolling surface, except for the Ozark uplift in the lower central portion, should be especially noted.



AMOUNT OF PRECIPITATION	LAND AREA, ACREAGE	PER CENT OF TOTAL LAND AREA OF U. S.
Under 10 inches . . .	153,634,432	8.1
10 to 20 inches . . .	588,775,719	30.9
20 to 30 inches . . .	314,258,301	16.5
30 to 40 inches . . .	320,089,545	16.8
40 to 50 inches . . .	324,846,189	17.1
50 to 60 inches . . .	160,366,829	8.4
60 to 80 inches . . .	28,898,105	1.5
80 to 100 inches . . .	9,430,528	0.5
Over 100 inches . . .	2,915,712	0.2

FIG. 4.—Precipitation includes rain, melted snow, sleet, and hail. The map is much reduced and generalized from a map prepared by the Weather Bureau and published in the Precipitation and Humidity section of the Atlas of American Agriculture. The map suggests why the United States should be divided agriculturally into an eastern and a western half. However, the division shown in Figure 2 does not follow a line of equal precipitation, but advances diagonally across two of the precipitation zones from 15 inches in the northwestern corner of North Dakota to 25 inches on the south Texas coast, where the evaporation is much greater and the rainfall more torrential and, consequently, more moisture is required for crop production.



LENGTH OF SEASON WITHOUT KILLING FROST	LAND AREA, ACRES	PER CENT OF LAND AREA OF UNITED STATES
Under 90 days . .	179,127,000	9.4
90 to 120 days . .	308,375,000	16.2
120 to 150 days . .	357,039,000	18.8
150 to 180 days . .	317,831,000	16.7
180 to 210 days . .	317,151,000	16.7
210 to 240 days . .	221,083,000	11.6
Over 240 days . .	202,091,000	10.6

FIG. 5.—This map is much reduced and generalized from a map prepared by the United States Weather Bureau and published in the Frost and the Growing season section of the Atlas of American Agriculture. The higher altitude of the Rocky Mountain and Arid Intermountain Regions (see Fig. 3), and the drier air (see Fig. 4), which permits rapid loss of heat at night, are two important causes of the short frost-free season. Over much of these regions the frost-free season is shorter than in northern Maine or Minnesota. The powerful influence of the Pacific and the lesser influence of the Atlantic in lengthening the growing season along their shores should also be noted.

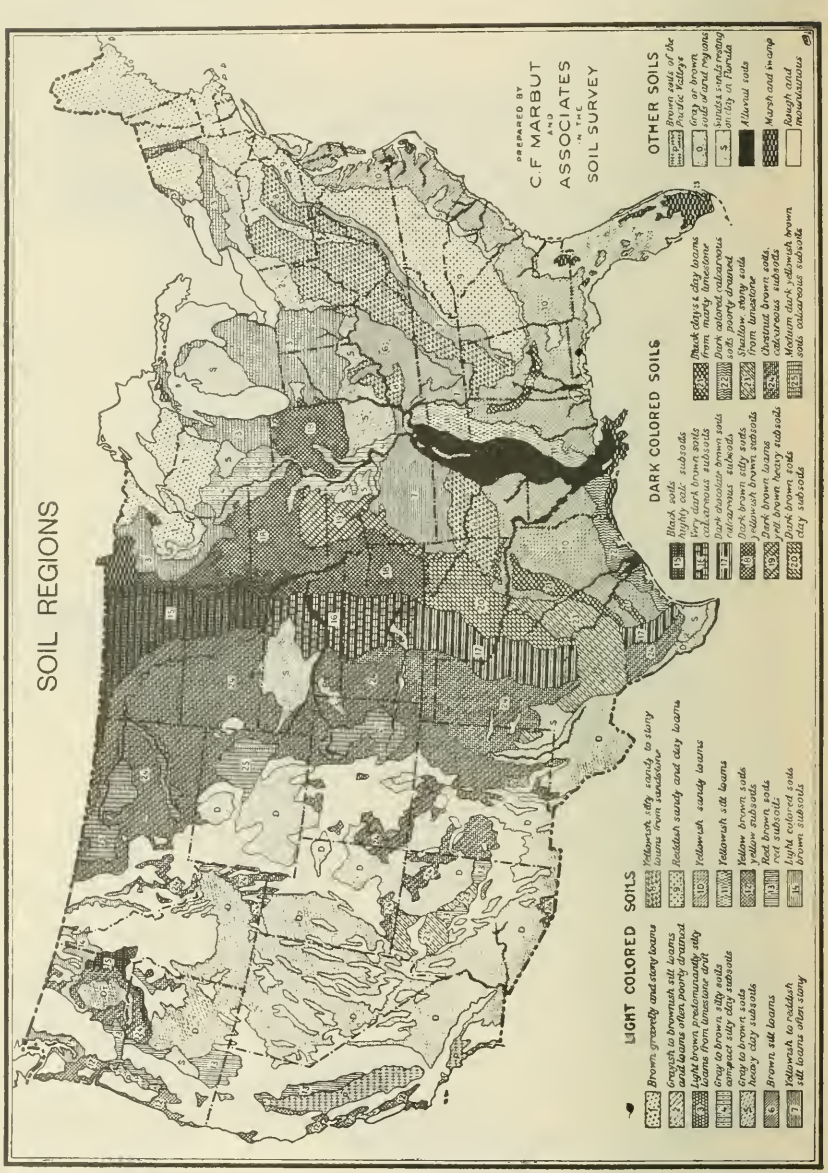


FIG. 6.—Soils originally or at present covered with forest are normally light colored, and are likely to be less fertile than soils in regions of lower rainfall. Grassland soils, in general, are dark colored, the humid prairie soils being commonly almost black and highly fertile—the subhumid prairie soils, blackest of all—while the semiarid short-grass plains soils are dark brown or chocolate colored, the color gradually fading to medium brown in regions of lesser rainfall, and to light brown or even ashy gray in desert areas. The light-colored forest soils in the United States total about 800 million acres, the dark-colored grassland soils about 600 million acres, and the light-colored arid soils about 500 million acres.

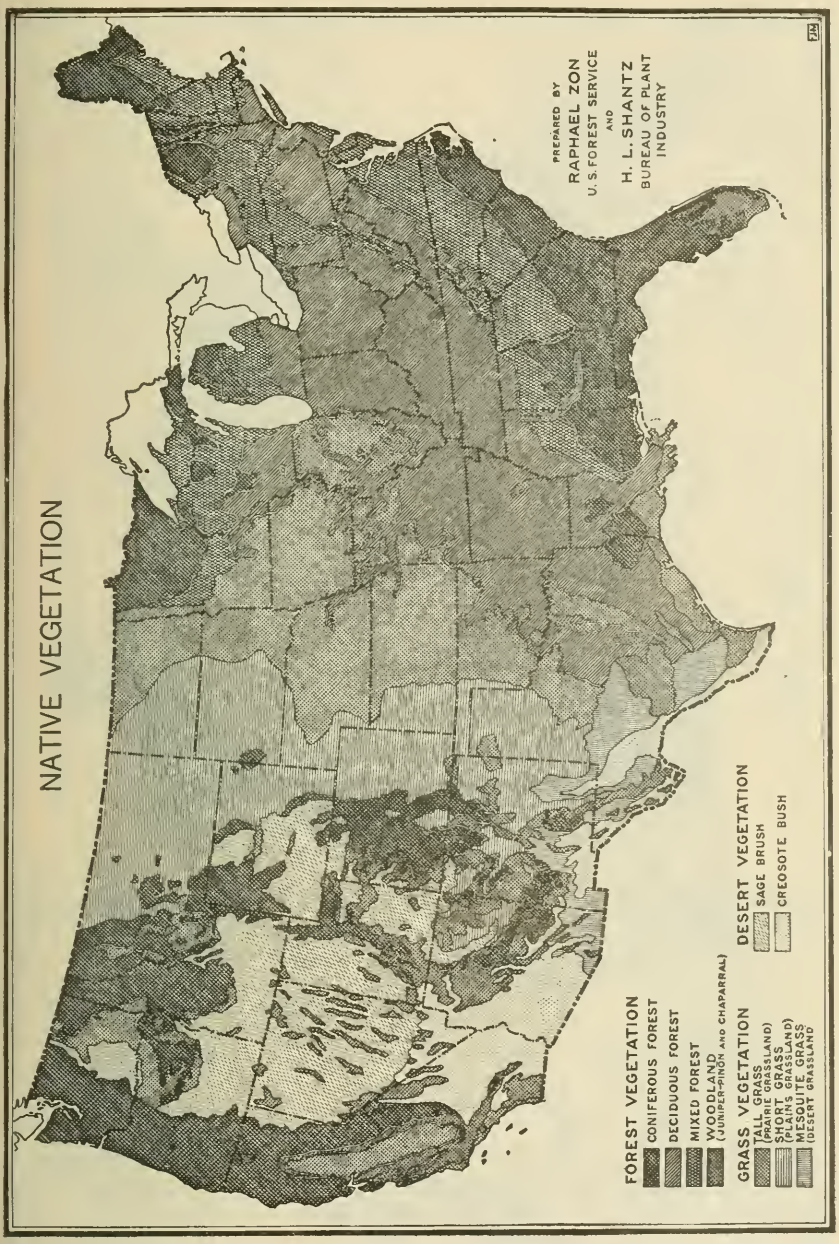
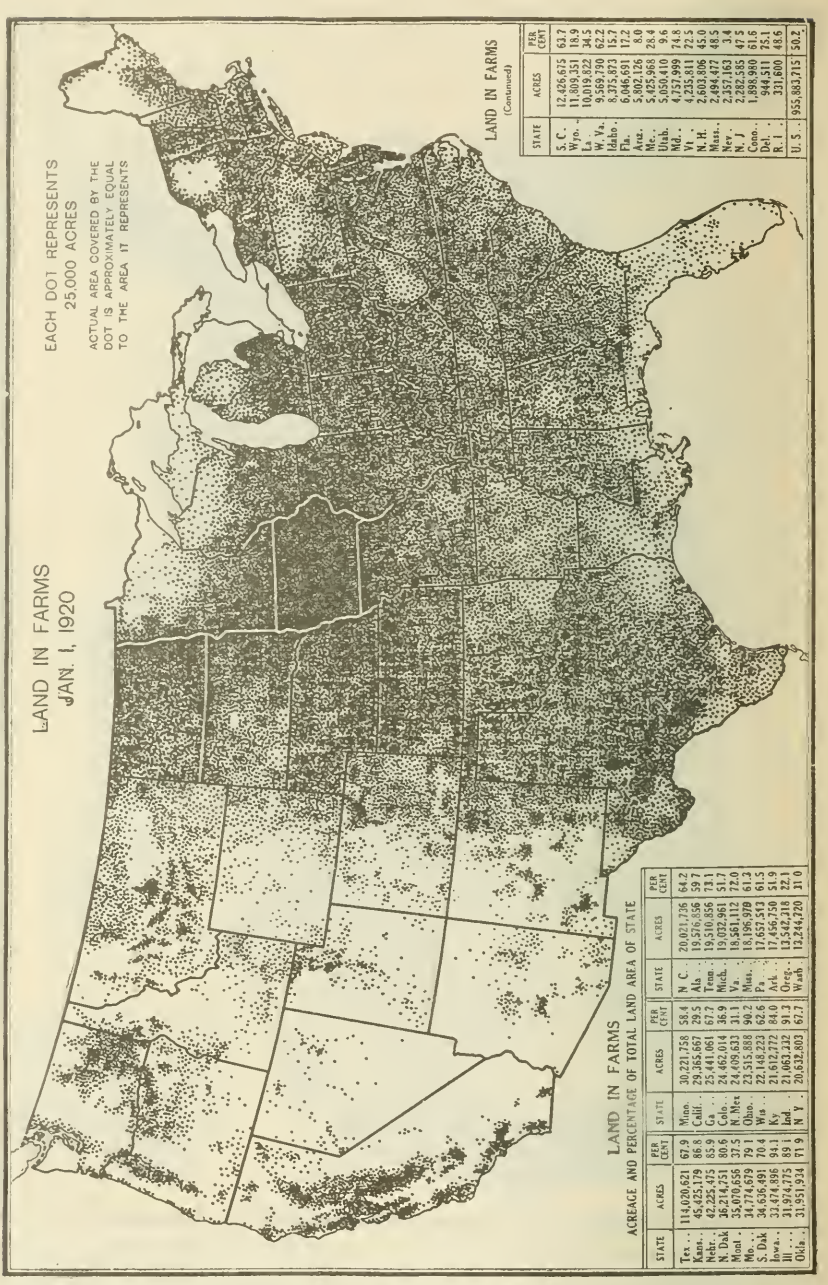


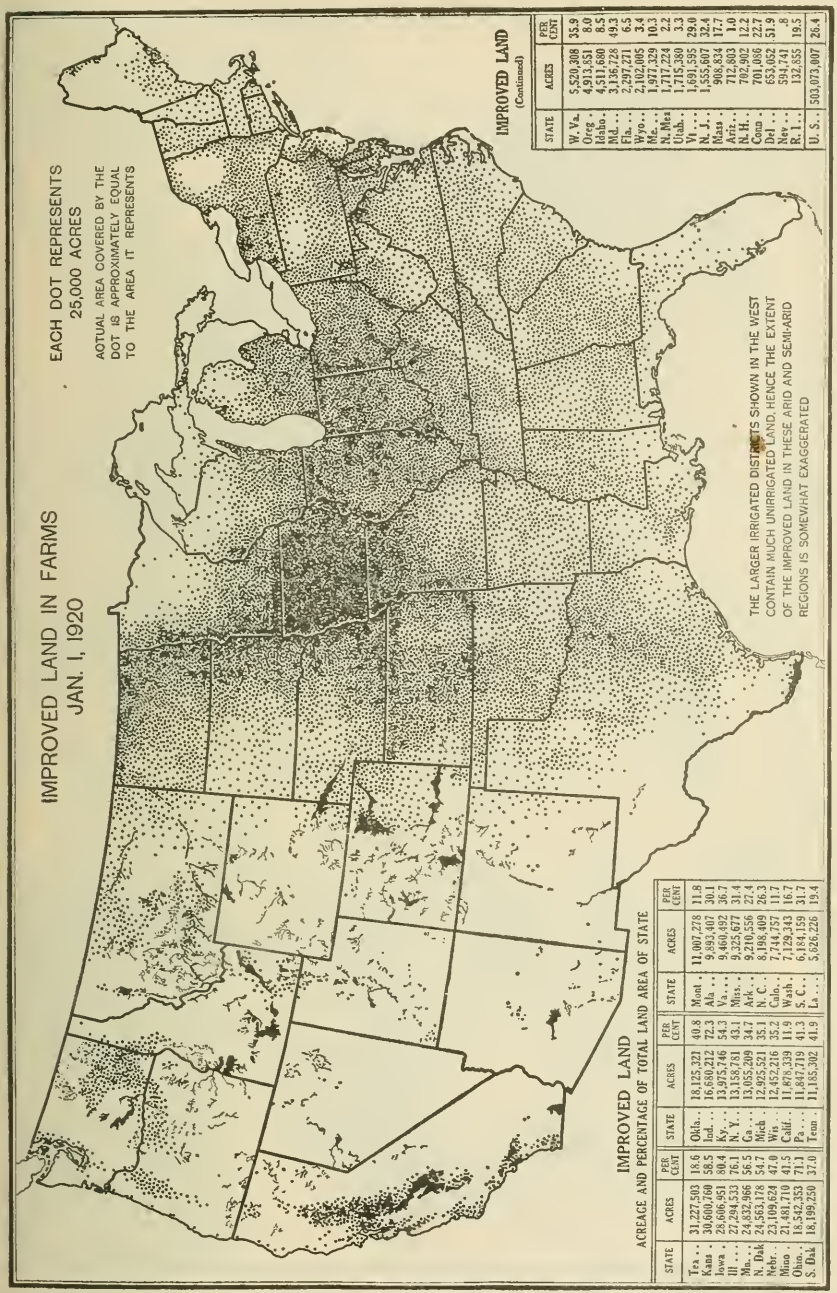
FIG. 7.—Forests, including semiarid woodland (pinon-juniper, chaparral, etc.), originally covered about 900 million acres in the United States. About 350 million acres have been cleared for agriculture, and as many more have been cut-over or devastated. (See Fig. 13.) About 600 million acres were clothed originally with grass, interspersed commonly with various herbaceous plants. Some 200 million acres of this grassland have been plowed up and used for crops, or for pasture in rotation with crops, including about 7 million acres irrigated. Desert vegetation characterized 400 million acres, of which about 12 million acres have been reclaimed by irrigation. Half of the remaining forest and woodland is pastured, practically all of the grassland, and nearly all of the desert. (See Fig. 12.)



STATE	ACRES	PER CENT
S. C.	12,426,675	63.7
Wyo.	11,809,351	18.9
La.	10,103,750	34.5
W. Va.	9,569,920	42.2
Idaho	8,375,823	15.7
Fla.	6,046,691	17.2
Ariz.	5,802,126	8.0
Me.	5,425,968	28.4
Utah	5,050,410	9.6
Md.	4,757,999	74.8
Vt.	4,235,811	22.5
N. H.	2,603,806	45.0
Mass.	2,494,417	48.5
Nev.	2,257,153	4.4
N. J.	2,252,583	47.5
Conn.	1,899,990	61.6
Del.	944,511	75.1
R. I.	331,600	48.6
U. S.	955,883,715	50.2

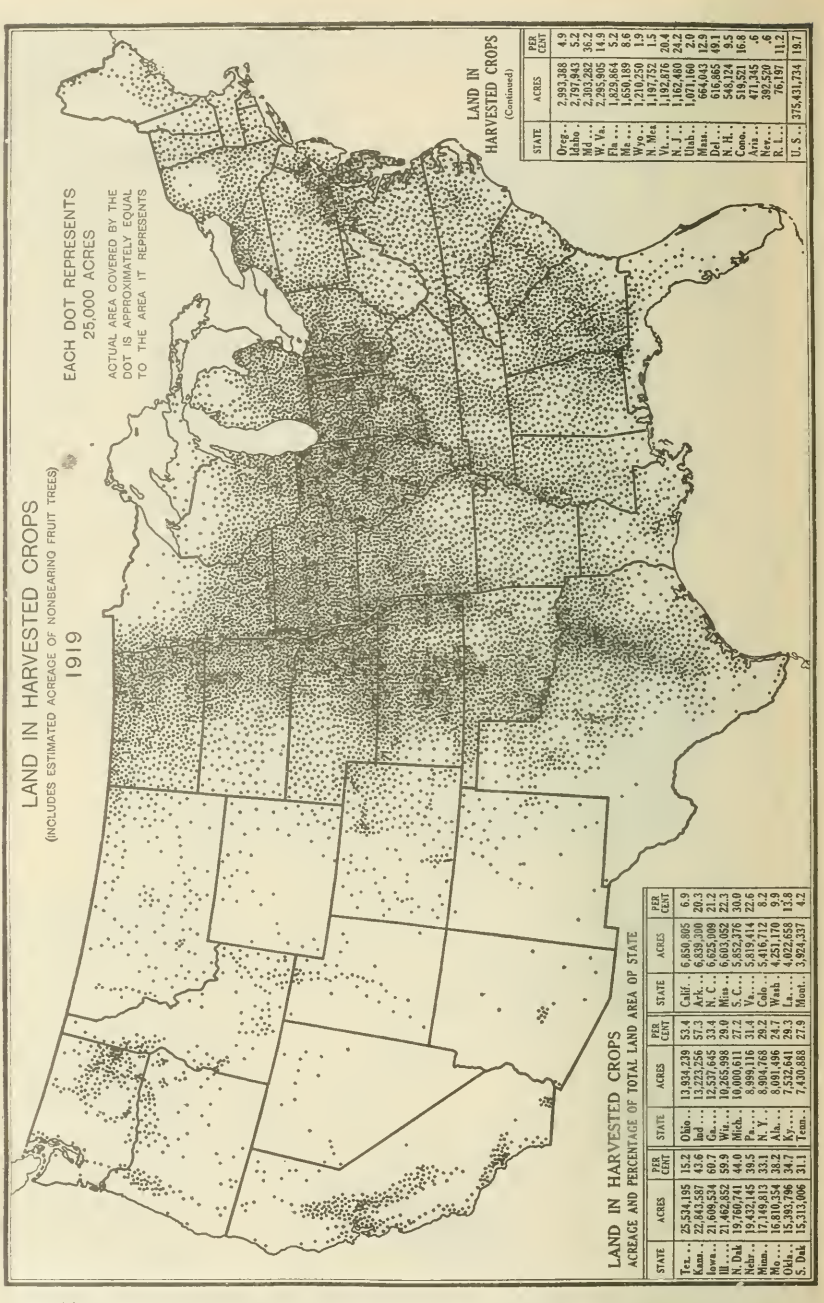
STATE	ACRES	PER CENT
Tex.	114,070,621	67.9
Kans.	46,425,179	86.8
Nebr.	42,225,475	85.9
N. Dak.	36,214,751	80.6
Mont.	35,070,656	37.5
Mo.	34,774,679	79.1
S. Dak.	34,636,491	70.4
Iowa.	33,474,896	94.1
Ill.	31,974,775	89.1
Okla.	31,951,934	71.9
Minn.	30,221,758	58.4
Calif.	29,365,667	29.5
Ga.	25,441,061	67.7
Colo.	24,462,014	36.9
N. Mex.	24,409,633	31.1
Ohio.	23,515,888	90.2
Wis.	22,148,223	62.6
Ky.	21,612,772	84.0
Ind.	21,063,422	91.2
N. Y.	20,632,803	67.7
N. C.	20,021,736	64.2
Ala.	19,576,556	59.7
Tenn.	19,510,856	73.1
Mich.	19,032,961	51.7
Va.	18,581,112	72.0
Miss.	18,196,979	61.3
Pa.	17,657,513	61.5
Ark.	17,456,750	51.9
Oreg.	13,346,418	22.1
Wash.	13,244,720	31.0

FIG. 8.—Three-quarters of the farm land is in the Mississippi Valley. Or considering the distribution with reference to rainfall, two-thirds is humid farm land in the East, and one-third is mostly arid, semiarid, or irrigated farm land in the West. In the East the land not in farms is hilly, stony, sandy, swampy, or infertile, and nearly all in forest or recently cut over. (See Fig. 13.) But in the West only one-sixth of the land not in farms is in forest, and one-ninth in woodland and chaparral, while one-sixteenth is absolute desert, the remaining two-thirds being open range, more or less covered with grasses and shrubby plants and used for grazing cattle or sheep. (See Figs. 81 and 92.)



STATE	ACRES	PER CENT
Tex.	31,227,503	18.6
Kans.	30,600,760	58.5
Iowa	25,606,551	69.4
Ill.	24,774,343	76.1
Mo.	24,432,965	56.5
N. Dak.	24,563,178	54.7
Nebr.	23,109,624	47.0
Minn.	21,481,710	41.5
Ohio	18,542,353	71.1
S. Dak.	18,199,250	37.0
Okla.	18,125,321	40.8
Ind.	16,680,212	72.3
Ky.	13,975,746	54.3
N. Y.	13,158,781	43.1
Wis.	12,955,209	38.7
Mich.	12,923,271	54.4
Wis.	12,452,216	35.2
Calif.	11,876,339	11.9
Pa.	11,847,719	41.3
Tenn.	11,185,302	41.9
Mont.	11,007,278	11.8
Ala.	9,993,407	30.1
Va.	9,460,492	36.7
Miss.	9,325,677	31.4
Ark.	9,210,556	27.4
N. C.	8,196,469	16.3
Colo.	7,798,755	11.1
Wash.	7,129,343	16.7
S. C.	6,184,159	31.7
La.	5,626,226	19.4
W. Va.	5,520,308	35.9
Oreg.	4,913,551	8.0
Idaho	4,511,680	8.5
Md.	3,136,728	49.3
Fla.	2,297,271	6.5
Wyo.	2,102,095	3.4
Me.	1,977,329	10.3
N. Mex.	1,717,224	2.2
Utah	1,715,380	3.3
N. J.	1,581,695	29.0
Mass.	908,834	17.7
Ariz.	712,803	1.0
N. H.	702,902	12.2
Conn.	701,056	22.7
Del.	653,052	51.9
Nev.	594,741	.8
R. I.	132,555	19.5
U. S.	503,073,807	26.4

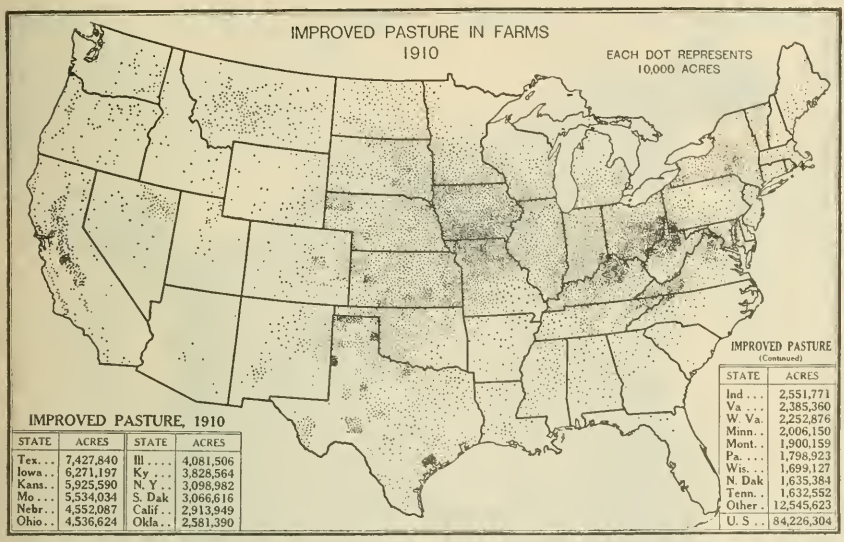
FIG. 9.—Improved land includes "all land regularly tilled or mowed; land in pasture that has been cleared or tilled; land lying fallow; land in gardens, orchards, vineyards, and nurseries; and land occupied by buildings, yards, and barnyards." Four-fifths of the improved land is in the humid eastern half of the United States; and three-fifths is concentrated in a triangular-shaped area, the points of which are located in western Pennsylvania, central Texas, and north-central North Dakota. In this area 60 per cent of the land area is improved farm land, whereas in the United States outside this area only 15 per cent is improved.



STATE	ACRES	PER CENT
Oreg...	2,993,388	4.9
Idaho...	2,797,943	5.2
Md ...	2,303,282	36.2
W. Va..	2,285,905	14.9
Fla ...	1,823,864	5.2
Me	1,650,189	8.6
Wyo...	1,210,250	1.9
N. Mex	1,197,752	1.5
Vt. ...	1,192,816	20.4
N. J...	1,162,480	24.2
Nev...	1,041,400	2.0
Mass..	661,440	21.0
Del ...	616,665	49.1
N. H..	548,124	9.5
Conn..	518,521	16.8
Ariz...	471,345	.6
Nev...	382,520	.6
R. I...	76,197	11.2
U. S..	375,431,734	19.7

STATE	ACRES	PER CENT	STATE	ACRES	PER CENT	STATE	ACRES	PER CENT
Tex...	25,534,195	15.2	Ohio...	13,934,229	53.4	Calif..	6,850,805	6.9
Kans..	22,843,587	43.6	Ind ...	13,223,256	57.3	Ark...	6,839,300	20.3
Iowa..	21,608,534	60.7	Ga....	12,537,645	33.4	N. C..	6,625,009	21.2
Ill ...	21,462,852	59.9	Wis...	10,265,998	29.0	Miss..	6,603,052	22.3
N. Dak	19,760,741	44.0	Mich..	10,000,611	27.2	S. C...	5,852,376	30.0
Nebr..	19,432,145	39.5	Pa....	8,999,116	31.4	Va....	5,819,414	22.6
Minn..	17,149,813	33.1	N. Y..	8,904,268	29.2	Colo..	5,416,712	8.2
Mo ...	16,810,354	38.2	Ala...	8,091,496	24.1	Wash..	4,251,170	7.9
Okla..	15,393,796	34.7	Ky....	7,522,841	29.3	La....	4,022,559	13.8
S. Dak	15,213,006	31.1	Tenn..	7,430,858	27.9	Mont..	3,984,337	4.2

FIG. 10.—Over five-sixths of the crop land is in the humid eastern half of the United States, and nearly two-thirds is concentrated in the triangular shaped area described under Figure 9. In this area, which includes only about one-fourth of the land of the United States, are produced four-fifths of the corn, three-fourths of the wheat and oats, and three-fifths of the hay crop of the nation. No region in the world of equal size affords so favorable natural conditions for the growth of corn, and few regions possess so favorable conditions for the culture of the small grain and hay crops. (See Figs. 24, 29, 30, 32, 33, 34, and 38.)



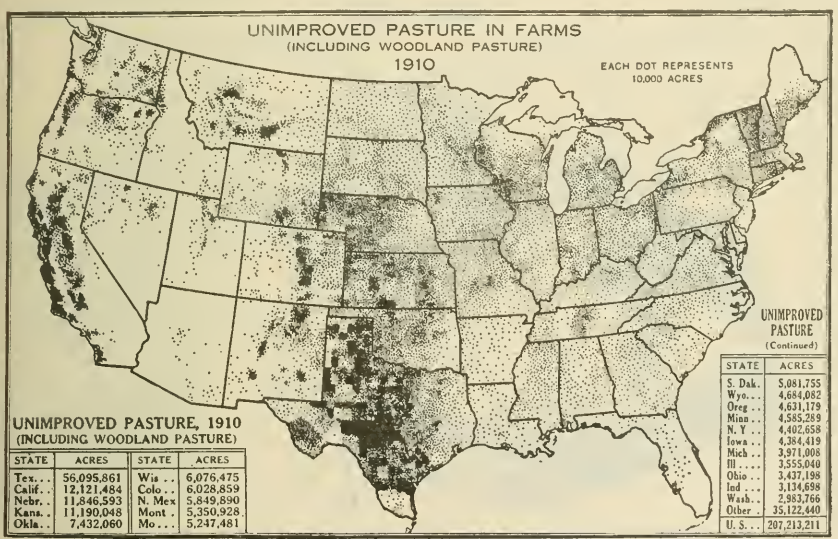
IMPROVED PASTURE, 1910

STATE	ACRES	STATE	ACRES
Tex. . .	7,427,840	Ill	4,081,506
Iowa . .	6,271,197	Ky . . .	3,828,564
Kans. .	5,925,590	N. Y . .	3,098,982
Mo . . .	5,534,034	S. Dak	3,066,616
Nebr. .	4,552,087	Calif . .	2,913,949
Ohio . .	4,536,624	Okla. .	2,581,390

IMPROVED PASTURE
(Continued)

STATE	ACRES
Ind . . .	2,551,771
Va . . .	2,385,360
W. Va.	2,252,876
Minn. .	2,006,150
Mont. .	1,900,159
Pa. . . .	1,798,923
Wis. . .	1,699,127
N. Dak	1,635,384
Tenn. .	1,632,552
Other .	12,545,623
U. S . .	84,226,304

FIG. 11.—This map shows the location of the acreage of improved pasture, according to the returns of the 1910 census, which were tabulated in 1917 by the Department of Agriculture and published in Bulletin No. 626. The returns of the 1920 census have not yet been compiled. It appears probable that war-time prices encouraged the plowing and planting to crops of about 15 million acres of improved pasture between 1910 and 1920. The concentration of pasture acreage shown in certain Texas counties is owing largely to the census accrediting to the county in which the ranch headquarters is located the acreage that may extend into adjacent counties. The large acreage of improved pasture in the Ohio River valley and in the Corn Belt west of the Mississippi is noteworthy.



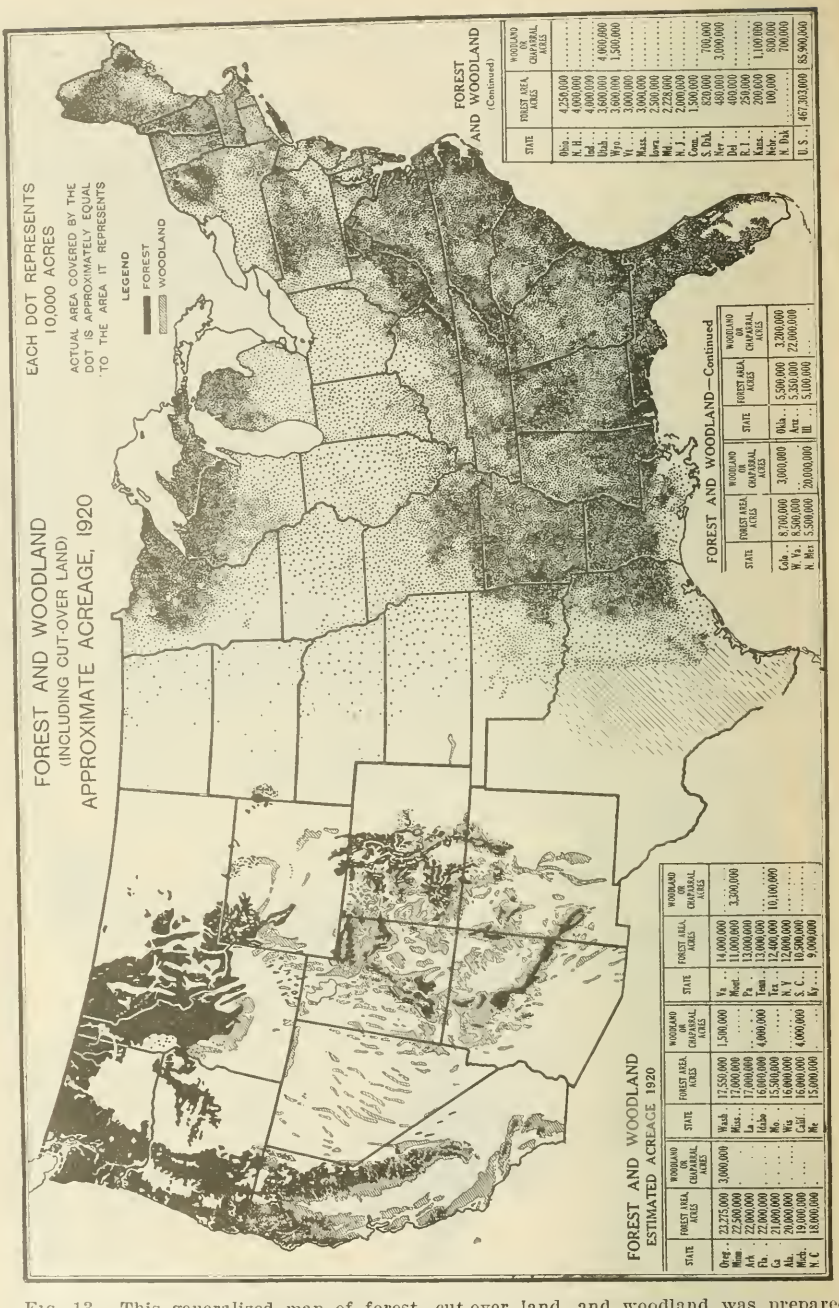
UNIMPROVED PASTURE, 1910
(INCLUDING WOODLAND PASTURE)

STATE	ACRES	STATE	ACRES
Tex. . .	56,095,861	Wis . .	6,076,475
Calif. .	12,121,484	Colo . .	6,028,859
Nebr. .	11,846,593	N. Mex	5,849,890
Kans. .	11,190,048	Mont .	5,350,928
Okla. .	7,432,060	Mo . . .	5,247,481

UNIMPROVED PASTURE
(Continued)

STATE	ACRES
S. Dak.	5,081,755
Wyo. .	4,684,082
Oreg . .	4,631,179
Minn . .	4,585,289
N. Y . .	4,402,658
Iowa . .	4,384,419
Mich . .	3,971,008
Ill . . .	3,555,040
Ohio . .	3,437,198
Ind . . .	3,134,698
Wash. .	2,983,766
Other .	35,122,440
U. S. . .	207,213,211

FIG. 12.—This map shows the location of forest and woodland in farms that was pastured in 1909, amounting to 98 million acres, and that of "other unimproved land" used for pasture, which amounted to about 109 million acres. In the States from Minnesota to Texas and eastward, especially in the South, forest and woodland pasture is much the larger item; but in the Great Plains Region and westward "other unimproved" pasture, which consists almost wholly of native grasses and herbs, is the more important. In addition to the unimproved pasture in farms in the West there is a vast acreage of similar land not in farms, the aggregate of unimproved pasture and range in the West being about 800 million acres.



STATE	FOREST AREA, ACRES	WOODLAND OR CHAPARRAL ACRES
Oreg.	23,275,000	3,000,000
Minn.	22,500,000	
Ark.	22,000,000	
Fla.	22,000,000	
Ga.	21,000,000	
Ala.	20,000,000	
Mich.	19,000,000	
N. C.	18,000,000	
Wash.	17,550,000	1,500,000
Miss.	17,000,000	
La.	17,000,000	
Idaho	16,000,000	4,000,000
Mo.	15,500,000	
Wis.	16,000,000	
Calif.	16,000,000	4,000,000
Me.	15,000,000	
Va.	14,000,000	1,500,000
Mont.	13,000,000	
Pa.	13,000,000	
Tenn.	13,000,000	
Tex.	12,400,000	10,100,000
N. Y.	12,000,000	
S. C.	10,500,000	
Ky.	9,000,000	
Colo.	8,700,000	3,000,000
W. Va.	8,500,000	
N. Mex.	5,500,000	20,000,000
Ohio	4,250,000	
N. H.	4,000,000	
Ind.	4,000,000	
Utah	3,600,000	4,000,000
Wyo.	3,600,000	1,500,000
Vt.	3,000,000	
Mass.	3,000,000	
Iowa	2,500,000	
Md.	2,228,000	
N. J.	2,000,000	
Conn.	1,800,000	
S. Dak.	820,000	700,000
Nev.	480,000	3,000,000
Del.	400,000	
R. I.	250,000	
Kans.	200,000	1,100,000
Nebr.	100,000	800,000
N. Dak.		700,000
U. S.	467,303,000	85,900,000
Okla.	5,500,000	2,200,000
Ariz.	5,500,000	22,000,000
Ill.	5,100,000	

FIG. 13.—This generalized map of forest, cut-over land, and woodland was prepared in cooperation with the Forest Service. The figures given in the table are merely tentative. The estimates for the States in the originally forested eastern portion of the United States, except for several States in which forest surveys have been made, are based largely on deductions from the statistics of the 1920 census. Of the 467 million acres of forest and cut-over land in the United States about one-half is in the South, one-eighth in the Northeastern States, one-eighth in the Lake States, and nearly one-quarter in the West, mostly in the Rocky Mountain and North Pacific Regions. However, over half of the 137 million acres of virgin saw timber is in the West.

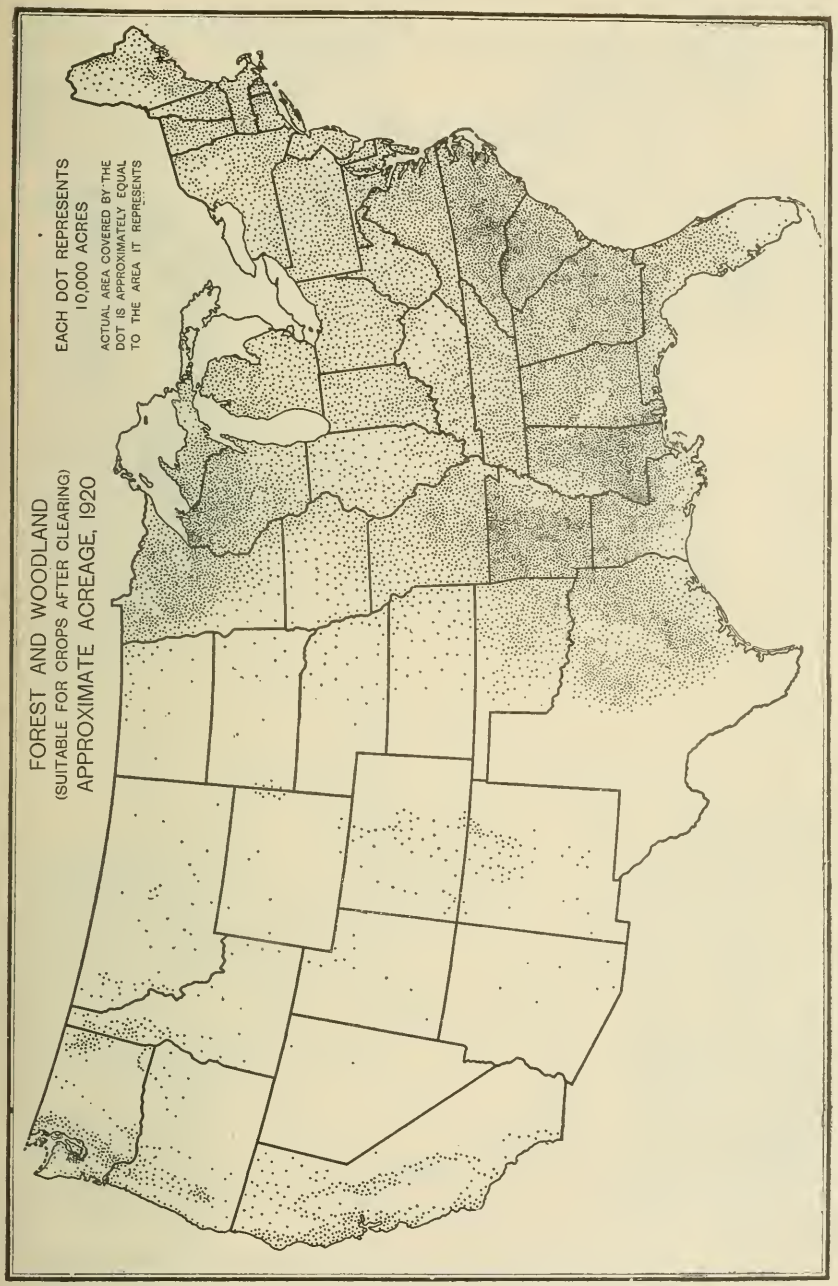
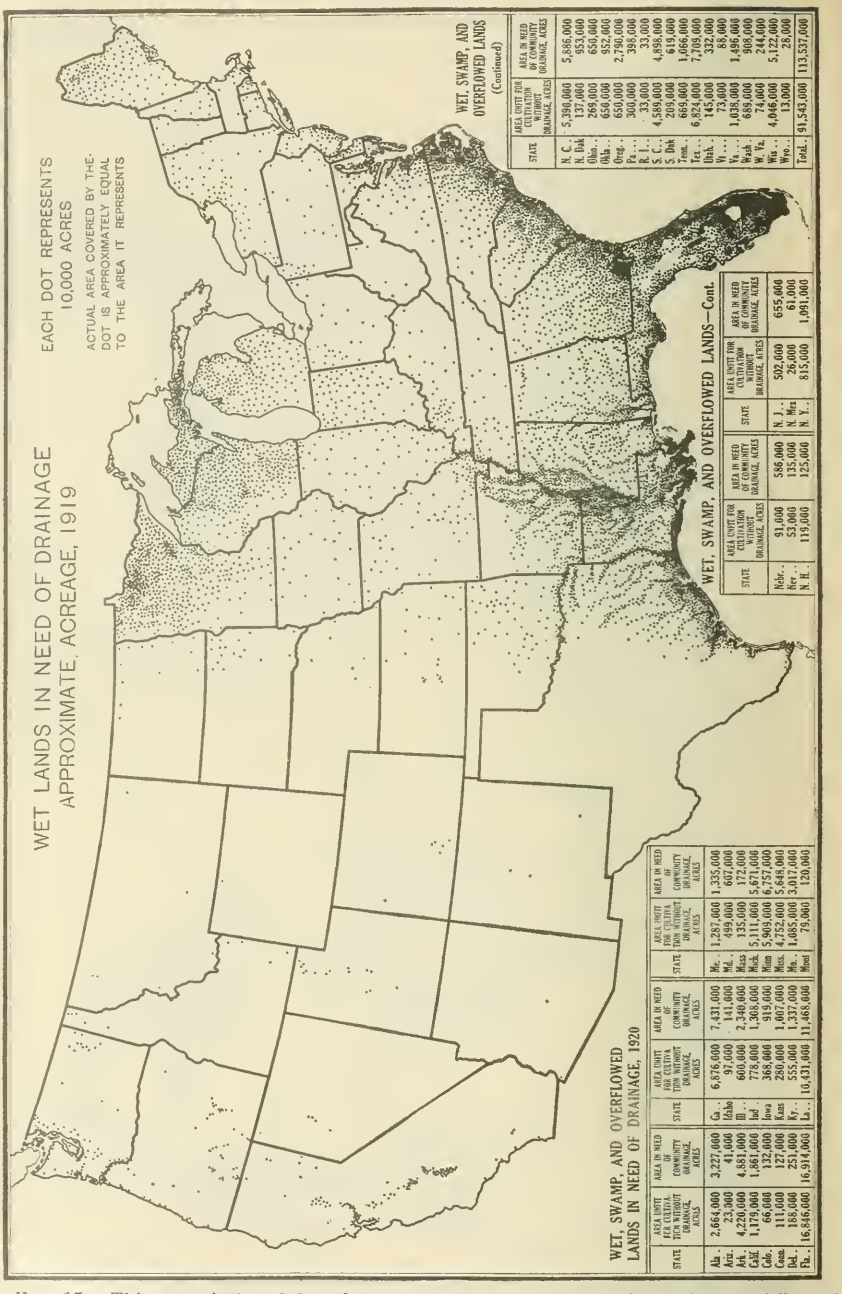
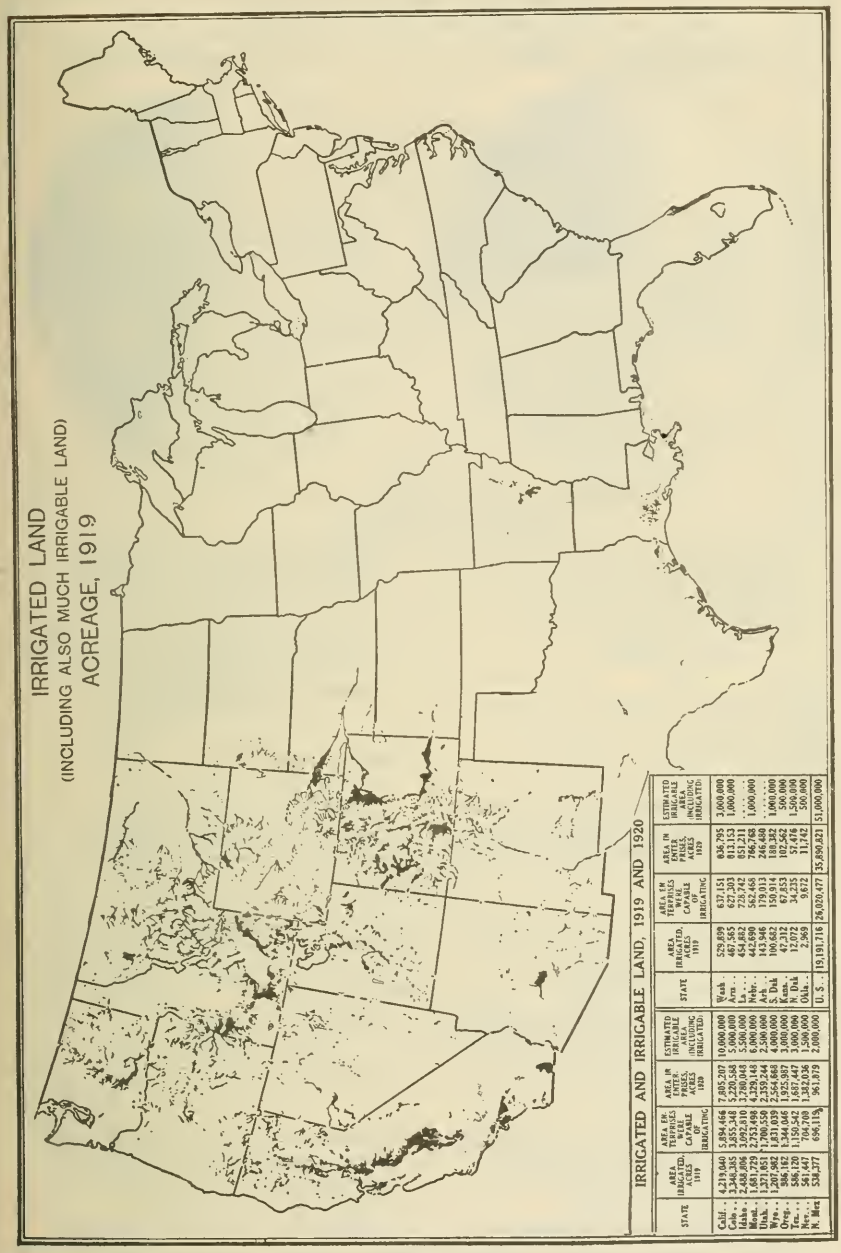


FIG. 14.—This map shows the approximate location and extent of forest, cut-over land, and woodland which could be used for the production of crops after clearing, and in many areas after drainage also. Only such part of this land should be cleared, however, as will pay adequate return on the cost of clearing. The estimates were compiled in 1918 from census data, Forest Service reports, and from correspondence with State and county officials and lumber companies, and not in 1920, as stated. Revised estimates are being compiled, based largely on 1920 census figures, soil survey reports, and forest surveys, hence no table is given in connection with the map.



STATE	AREA UNFIT FOR CULTIVATION WITHOUT DRAINAGE, ACRES	AREA IN NEED OF COMMUNITY DRAINAGE, ACRES
Ala.	2,664,000	3,227,000
Ark.	4,223,000	4,581,000
Calif.	4,220,000	1,179,000
Colo.	1,179,000	66,000
Conn.	66,000	111,000
Del.	188,000	251,000
Fla.	16,846,000	16,914,000
Ga.	6,876,000	7,431,000
Idaho	817,000	1,111,000
Ill.	660,000	2,340,000
Ind.	778,000	1,308,000
Iowa	368,000	919,000
Kans	280,000	1,007,000
Ky.	555,000	1,337,000
La.	10,431,000	11,468,000
Me.	1,287,000	1,335,000
Mass.	468,000	462,000
Mich.	135,000	172,000
Minn.	5,111,000	5,671,000
Miss.	5,909,000	6,757,000
Mo.	4,752,000	5,648,000
Mont.	1,685,000	3,017,000
Nebr.	79,000	120,000
Nev.	91,000	586,000
N. H.	53,000	135,000
N. J.	119,000	125,000
N. Mex.	502,000	655,000
N. Y.	26,000	61,000
N. C.	815,000	1,991,000
N. Dak.	5,390,000	5,886,000
Ohio	137,000	953,000
Okla.	289,000	650,000
Oreg.	656,000	952,000
Pa.	650,000	2,790,000
R. I.	300,000	386,000
S. C.	33,000	73,000
S. Dak.	4,589,000	4,898,000
Tenn.	205,000	619,000
Tex.	669,000	1,066,000
Utah	145,000	332,000
Vt.	73,000	88,000
Va.	1,038,000	1,496,000
Wash.	668,000	908,000
W. Va.	74,000	244,000
Wis.	4,046,000	5,122,000
Wyo.	13,000	28,000
Total.	91,543,000	113,537,000

FIG. 15.—This map is based largely upon drainage reports available in the Office of Irrigation and Drainage Investigations, and upon soil survey, topographic, and Land Office maps. These reports and maps were compared with statistics of drainage enterprises and of land in farms needing drainage, available for the first time in the 1920 census, by L. A. Jones, of the Bureau of Public Roads, and F. J. Marschner, of the Office of Farm Management and Farm Economics, who drew the map. Two-thirds of the land unfit for cultivation without drainage is in the Southern States, and one-half of the remainder is in the three Lake States. Nearly all of the wet land in the South, except the Florida Everglades and prairies, tidal marsh, and Gulf coastal prairies, is forested, and requires both drainage and clearing; but much of the wet land in the Lake States consists of unforested peat bogs.



IRRIGATED AND IRRIGABLE LAND, 1919 AND 1920

STATE	AREA IRRIGATED, ACRES 1919	AREA IN TERRITORIES WITH WATER CAPABLE OF IRRIGATING	AREA IN ENTERPRISES ACRES 1920	ESTIMATED IRRIGABLE AREA (INCLUDING IRRIGATED)
Calif.	4,219,640	5,854,466	7,805,207	10,000,000
Colo.	3,340,385	3,855,348	5,220,548	5,000,000
Idaho	2,488,896	3,092,810	3,720,043	5,500,000
Mont.	1,371,853	1,780,559	2,359,244	2,500,000
Utah	1,207,982	1,831,039	2,564,868	4,000,000
Wyo.	386,182	1,344,046	1,925,987	3,000,000
Ore.	556,470	1,150,000	1,500,000	1,500,000
Nev.	541,447	750,700	1,382,036	1,500,000
N. Mex.	530,377	696,113	961,979	2,000,000

STATE	AREA IRRIGATED, ACRES 1919	AREA IN TERRITORIES WITH WATER CAPABLE OF IRRIGATING	AREA IN ENTERPRISES ACRES 1920	ESTIMATED IRRIGABLE AREA (INCLUDING IRRIGATED)
Wash.	529,899	637,151	836,795	3,000,000
Ariz.	467,995	627,203	813,153	1,000,000
La.	454,682	720,742	951,211	
Kan.	385,446	538,738	1,000,000	1,000,000
Ark.	143,946	179,913	246,648	
S. Dak.	190,622	150,914	180,382	1,060,000
Kans.	67,312	97,853	102,582	500,000
Nebr.	54,370	71,722	81,000	1,500,000
Okla.	2,369	9,672	11,742	500,000
U. S.	19,191,716	26,020,477	35,890,821	51,000,000

FIG. 16.—The area of irrigated land increased 5 million acres, or one-third, between 1909 and 1919; and the irrigation enterprises were capable of irrigating 7 million acres more than were actually irrigated in 1919. There is sufficient water in the West to irrigate double the area the enterprises were capable of irrigating in 1920, or about 50 million acres, when higher prices of farm products justify the constantly increasing cost per acre of construction of irrigation works. California, Colorado, and Idaho lead in irrigated acreage at present; but Montana rises into second place in the estimate of total irrigable area. Estimates of irrigable area were supplied by R. P. Teele.



FIG. 17.—It is possible to increase the area of improved land about 300 million acres, or 60 per cent, by irrigation, drainage, clearing, and dry farming. But until farm products are higher in price most of this reclamation work would not prove profitable. On the other hand, although there are about 355 million acres of humid land so hilly or sterile as to be fit only for forests, the price of lumber will probably warrant the additional use permanently of 100 million acres of poor potentially arable land for forest instead of crops. In other words, the present forest and cut-over area is not likely to decrease greatly. The area in cities and villages is relatively insignificant and will remain so even with double or treble the present population.

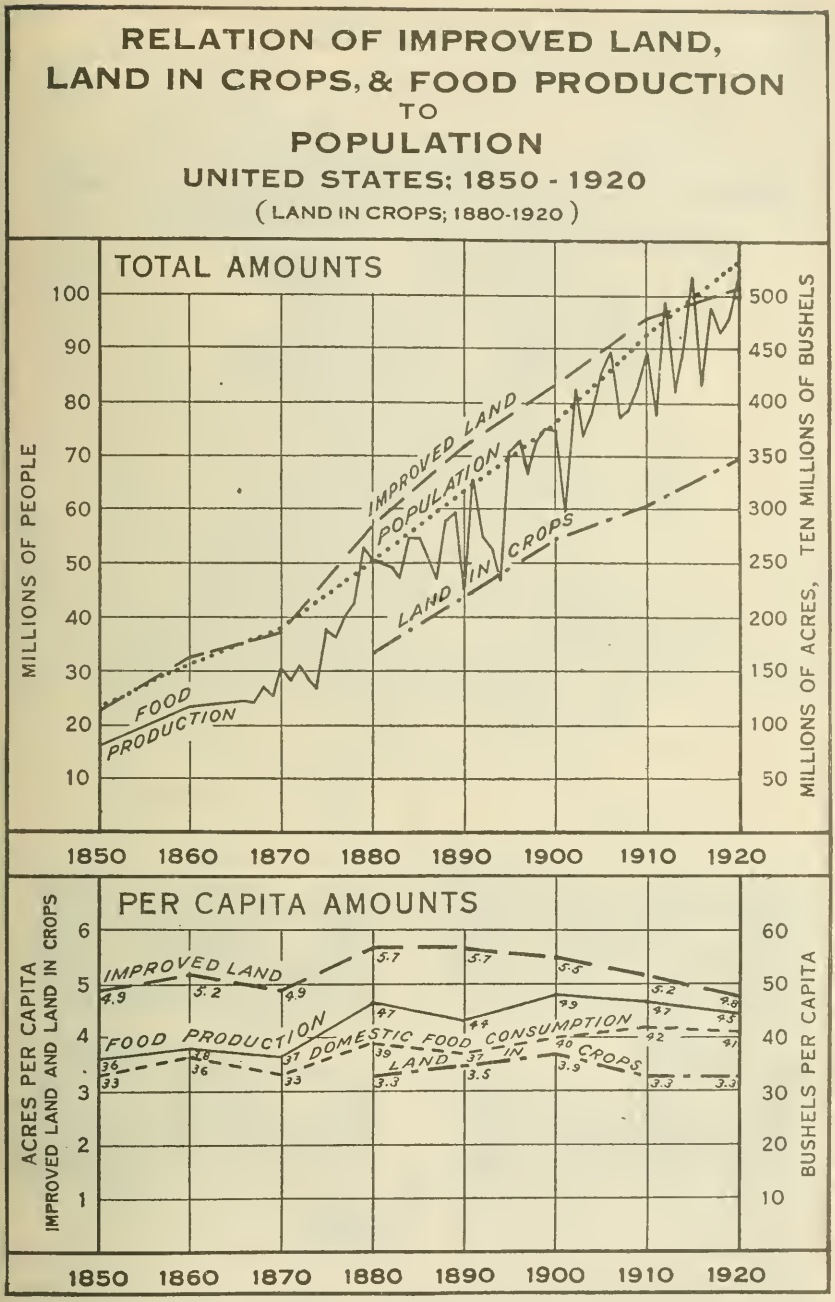


FIG. 18.—The amount of improved land kept pace with the increasing population from 1850 to 1870, increased more rapidly than population till about 1885, then more slowly till 1910, and during the decade 1910–1920 increased only 5 per cent, as compared with 15 per cent increase in population. Food production, however, increased more rapidly than population till about 1906, or for 20 years after the peak had been reached of acreage of improved land per capita, and has since increased more slowly than population. But consumption per capita has been maintained up to the present time by diminishing the exports. The per capita production and consumption figures are five-year averages centered on the census year.

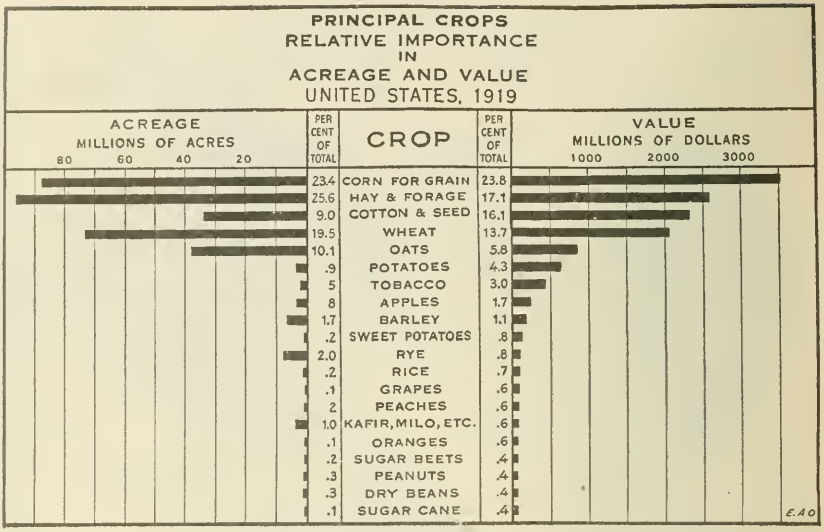


FIG. 19.—Five crops—corn, hay and forage, cotton, wheat, and oats—constitute nearly 90 per cent of the acreage and over 75 per cent of the value of all crops. Corn for grain is the leading crop on the basis of value, and if the acreage of corn cut for forage and for silage be added to that of corn for grain, instead of being included with hay and forage, corn is the leading crop also in acreage. Cotton ranked third in value, but fifth in acreage in 1919, the value of the cotton crop per acre being about twice that of corn or wheat. Wheat stood fourth in value but third in acreage, while oats were fifth in value and fourth in acreage. Potatoes, then tobacco and apples ranked next to these five crops in value, but barley, rye, and the grain sorghums ranked next in acreage.

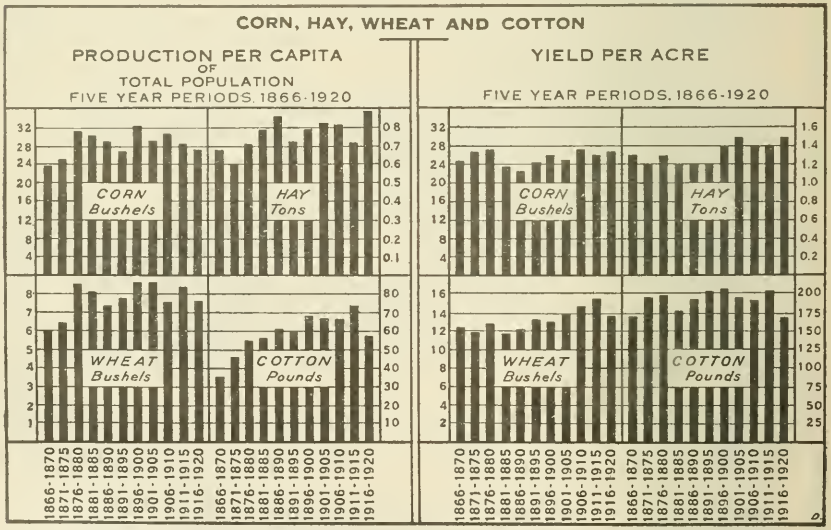
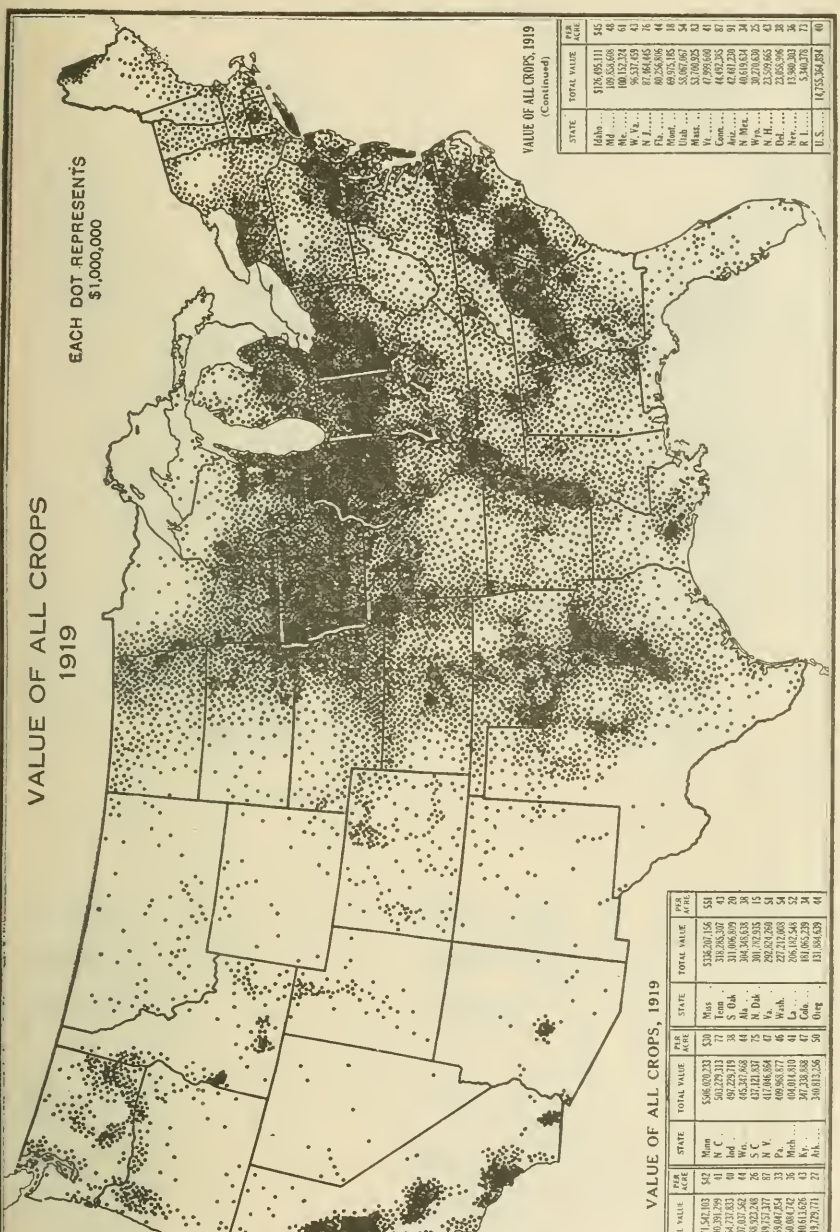


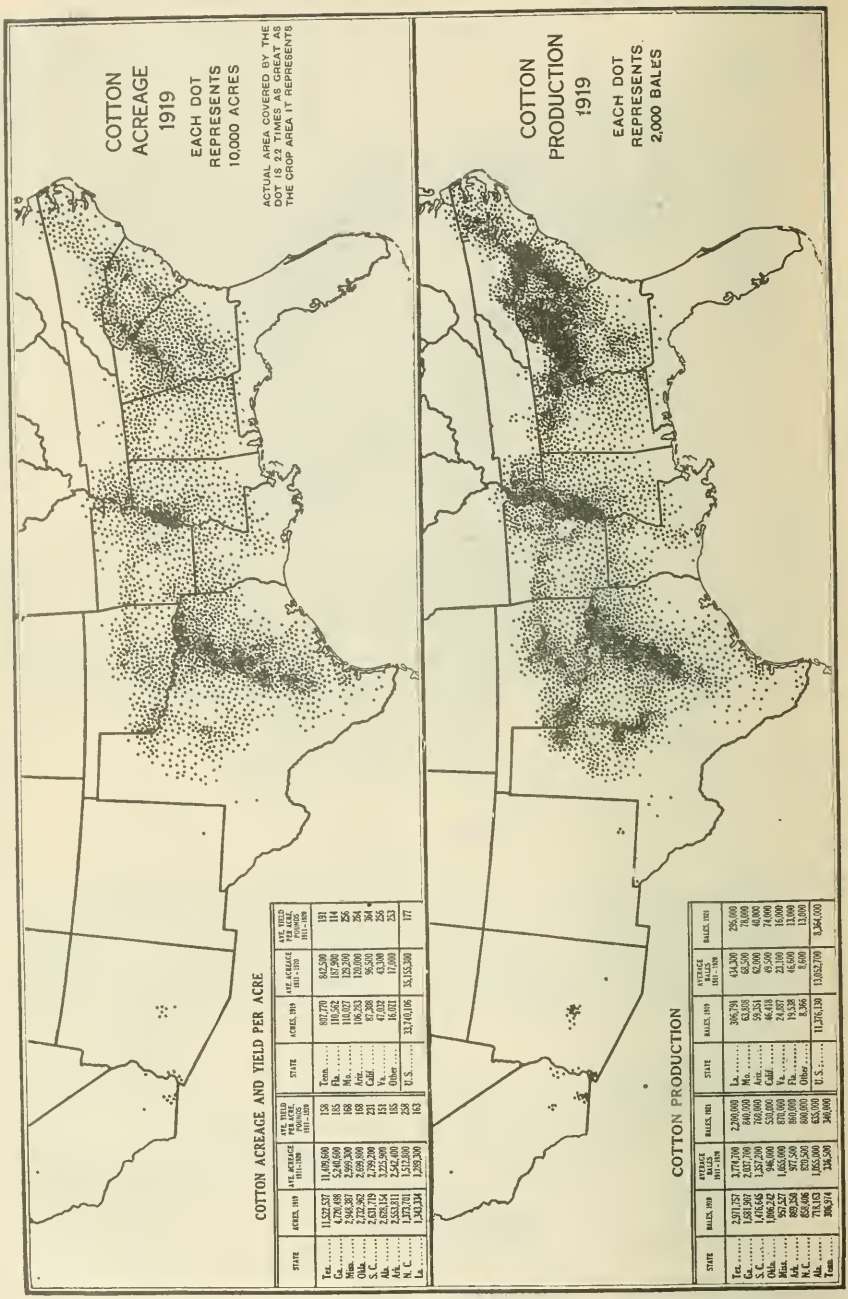
FIG. 20.—These four crops—corn, hay, wheat, and cotton—constitute three-fourths of the total crop acreage of the United States. Production per capita, it will be noted, rose for 15 to 20 years after the Civil War, then remained more or less steady for 25 to 30 years, and has recently declined, except in the case of hay. The yield per acre of corn has remained remarkably constant for 55 years, of hay and wheat has increased about one-sixth, but the yield per acre of cotton has declined notably since 1914. In general, production had kept pace with population until recently, not primarily because of increasing yields per acre, but mostly because of expanding crop acreage.



STATE	TOTAL VALUE	PER ACRE
Idaho	$176,495,111	$45
Md	109,553,608	48
Me	100,152,324	61
W. Va.	96,537,439	43
N. J.	87,864,405	78
Fla.	86,553,196	14
Mont.	69,825,105	18
Utah	55,867,467	54
Miss.	53,780,925	53
Vt.	47,999,660	41
Conn.	44,452,265	67
Ariz.	42,441,220	91
N. Mex.	30,618,524	24
Wyo.	30,573,753	25
N. H.	23,599,665	43
Del.	23,055,996	38
Nev.	13,980,383	36
R. I.	5,340,376	72
U.S.	14,705,364,894	40

STATE	TOTAL VALUE	PER ACRE
Tex.	$1,071,542,103	$42
Iowa	890,391,799	41
Ill.	866,233,833	49
Minn.	695,017,552	44
Kans.	588,922,726	26
Calif.	589,735,377	87
Mo.	559,046,854	33
Okla.	550,084,742	36
Ga.	540,613,626	43
Nebr.	519,729,171	27
Mich.	504,014,810	41
Ky.	367,238,888	47
Ark.	340,813,256	50
Ind.	490,229,319	58
Wis.	465,347,968	44
Colo.	457,172,153	25
N. Y.	411,046,884	47
Pa.	409,983,877	46
Oreg.	206,132,546	52
Wash.	227,212,665	54
La.	206,132,546	52
Fla.	183,065,239	34
Tenn.	131,884,639	44
S. Dak.	311,006,809	20
Ala.	304,348,838	38
W. Va.	302,874,269	15
Miss.	$338,267,156	$51

Fig. 21.—The eastern half of the United States produced in 1919 about 86 per cent of the value of all crops of the Nation; the value of the crops produced in the Cotton Belt and the Corn Belt being nearly 50 per cent. The value of the crops per square mile of land area was about $15,000 in the Corn Belt, and $8,700 in the Cotton Belt, descending to only $673 in the Arizona-California Desert Region; but the value per acre in crops was highest in the Arizona-California Desert ($95), where all crops are irrigated, and lowest in the Great Plains Region ($21), where most of the crops are grown under semiarid conditions.



COTTON ACREAGE AND YIELD PER ACRE

STATE	ACRES, 1919	AVE. ACREAGE 1911–1920	AVE. YIELD PER ACRE IN POUNDS 1911–1920
Tex.	11,527,537	11,495,000	138
Ga.	5,726,000	5,740,000	155
Miss.	2,598,362	2,599,300	168
Okla.	2,722,962	2,698,000	168
S.C.	2,631,719	2,799,200	231
Ala.	2,828,154	3,225,500	151
Ark.	2,533,311	2,545,400	158
N.C.	1,877,177	1,757,000	155
La.	1,343,134	1,289,300	163
Tenn.	802,220	862,500	181
Mo.	110,527	117,900	114
Ariz.	106,353	120,000	354
Calif.	67,208	96,500	384
Va.	47,022	43,300	255
Other	14,477	11,800	253
U.S.	33,740,176	35,155,300	177

COTTON PRODUCTION

STATE	BALES, 1919	AVERAGE BALES 1911–1920	BALES, 1921
Tex.	2,971,757	3,774,700	2,200,000
Ga.	1,581,367	2,037,700	840,000
S.C.	1,476,646	1,527,200	750,000
Miss.	1,092,552	1,360,000	550,000
Okla.	957,257	1,055,000	870,000
Ark.	889,350	977,500	860,000
N.C.	858,006	820,500	890,000
Ala.	711,163	1,055,000	645,000
Tenn.	306,214	358,500	340,000
La.	306,791	434,300	255,000
Mo.	63,858	85,500	70,000
Ariz.	44,531	74,000	74,000
Calif.	48,438	69,500	74,000
Va.	24,887	23,100	15,000
Fla.	19,538	46,600	13,000
Other	8,366	8,600	13,000
U.S.	11,376,130	13,862,700	8,364,000

FIGS. 22 AND 23.—The northern boundary of the Cotton Belt is approximately the line of 200 days average frost-free season (see Fig. 5) and 77° mean summer temperature, the southern boundary that of 11 inches autumn rainfall, because wet weather interferes with picking and damages the lint. This southern boundary is now moving northward, as the milder winter temperatures near the Gulf and longer season permit increased injury by the boll weevil. The western boundary of cotton production without irrigation is approximately the line of 23 inches average annual rainfall (see Fig. 4). The densest areas on the map are districts of richer soils, notably the Black Prairie of Texas and the Yazoo Delta (see Fig. 6), or heavily fertilized soils, especially those of the Piedmont and Upper Coastal Plain (see Fig. 109).

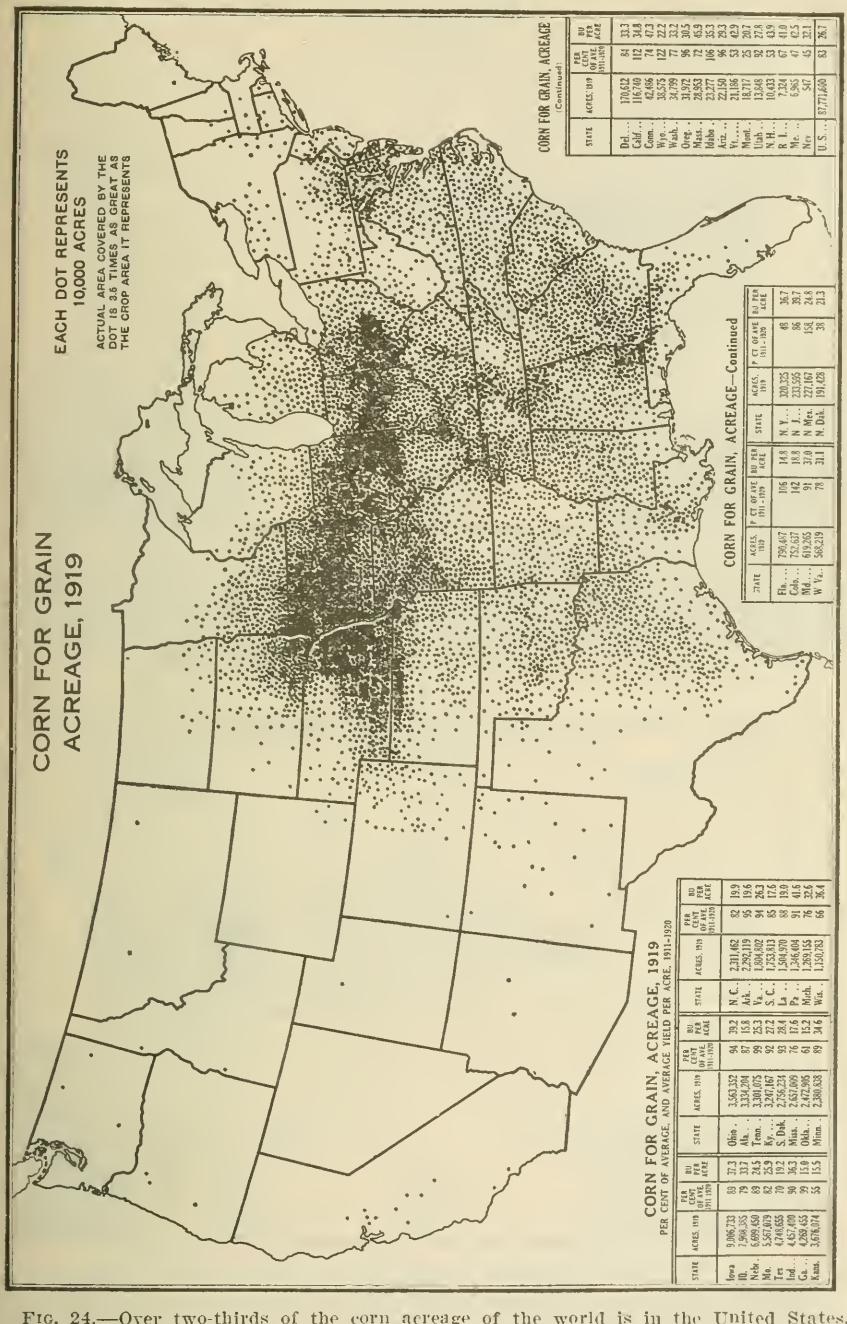
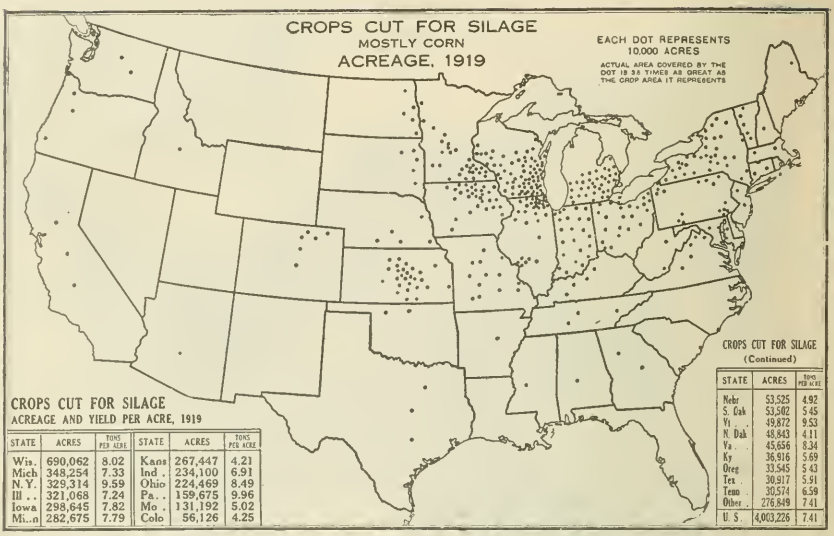


FIG. 24.—Over two-thirds of the corn acreage of the world is in the United States, nearly all east of the line of 8 inches mean summer rainfall and south of the line of 66° mean summer temperature. Nearly 90 per cent of the acreage of corn for grain in the United States is in the Corn Belt, the Corn and Winter Wheat Region, and the Cotton Belt. In these three regions corn constitutes about one-third of the acreage of all crops. In the Corn Belt it is dominant, contributing nearly two-fifths of the acreage and half of the value of all crops. Hay, associated with spring oats in the northern portion and with winter wheat in the southern portion, are the other important crops in the Corn Belt. (See Figs. 29, 32, and 38.)



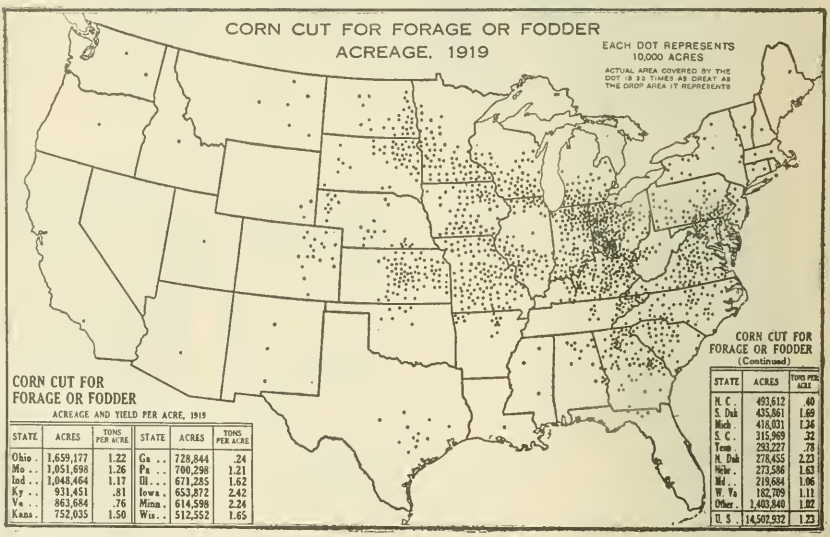
CROPS CUT FOR SILAGE
ACREAGE AND YIELD PER ACRE, 1919

STATE	ACRES	TONS PER ACRE	STATE	ACRES	TONS PER ACRE
Wis.	690,062	8.02	Kans	267,447	4.21
Mich	348,254	7.33	Ind.	234,100	6.91
N. Y.	329,314	9.59	Ohio	224,469	8.49
Ill..	321,068	7.24	Pa..	159,675	9.96
Iowa	298,645	7.82	Mo.	131,192	5.02
Mi..n	282,675	7.79	Colo	56,126	4.25

CROPS CUT FOR SILAGE
(Continued)

STATE	ACRES	TONS PER ACRE
Nebr	53,525	4.92
S. Dak	53,502	5.45
Vt.	49,872	9.53
N. Dak	48,843	4.11
Va.	45,656	8.34
Ky	36,916	5.69
Oreg	33,545	5.43
Tex.	30,917	5.91
Tenn	30,574	6.59
Other	276,849	7.41
U. S.	4,003,226	7.41

FIG. 25.—Corn constitutes probably 95 per cent or more of the acreage of crops cut for silage. In the Southwest relatively small amounts of kafir and milo are used for silage; and in the Northwest occasionally sunflowers are so used, likewise pea vines in Wisconsin; but the amounts, except of kafir and milo, are insignificant. Silage is fed principally to dairy cows in the winter, but its use for beef cattle is increasing rapidly, especially in the Corn Belt, and a small amount is fed to sheep. Consequently at present the area of silage crops corresponds in a general way with that of dairy cows, except in central Kansas, where silage is fed mostly to beef cattle. (See Figs. 81 and 82.)



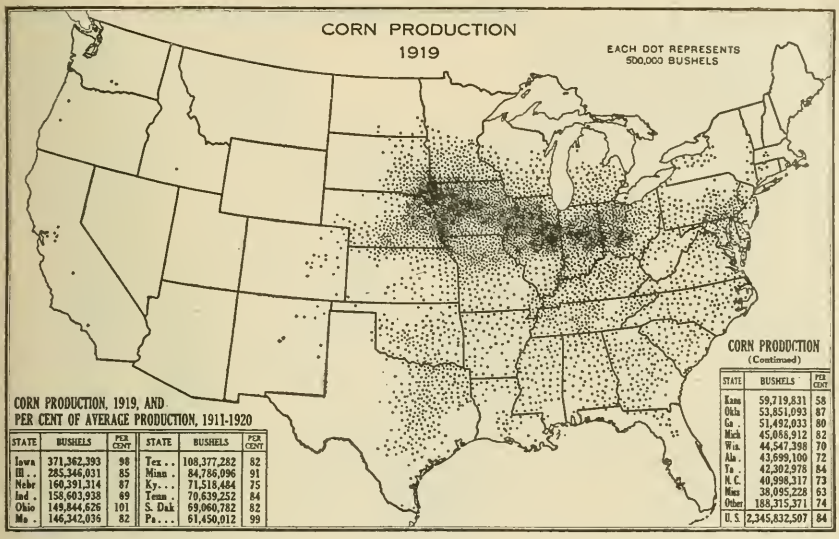
CORN CUT FOR FORAGE OR FODDER
ACREAGE AND YIELD PER ACRE, 1919

STATE	ACRES	TONS PER ACRE	STATE	ACRES	TONS PER ACRE
Ohio.	1,659,177	1.22	Ga ..	728,844	.24
Mo ..	1,051,698	1.26	Pa ..	700,298	1.21
Ind ..	1,048,464	1.17	Ill...	671,285	1.62
Ky ..	931,451	.81	Iowa.	653,872	2.42
Va ..	863,684	.76	Minn.	614,598	2.24
Kans.	752,035	1.50	Wis..	512,552	1.65

CORN CUT FOR FORAGE OR FODDER
(Continued)

STATE	ACRES	TONS PER ACRE
N. C.	493,612	.40
S. Dak	435,861	1.69
Mich.	416,031	1.36
S. C.	315,969	.32
Tenn	293,227	.78
N. Dak	278,455	2.23
Nebr.	273,586	1.63
Md ..	219,684	1.06
W. Va	182,709	1.11
Other.	1,403,840	1.02
U. S.	14,507,932	1.23

FIG. 26.—Corn is cut for forage mostly around the margin of the Corn Belt and in the Middle and South Atlantic States. This practice corresponds, in a general way, with the areas in which corn is cut and shocked. Doubtless much, perhaps most, of this corn reported to the census as cut for forage was also harvested for grain. Much of the acreage of corn shown on this map, therefore, is also shown on the map of corn for grain (Fig. 24). The Department of Agriculture estimates the area of corn cut for forage only in 1921 at 2,600,000 acres. Corn forage is fed almost wholly to cattle, though a little is used to feed sheep and horses.



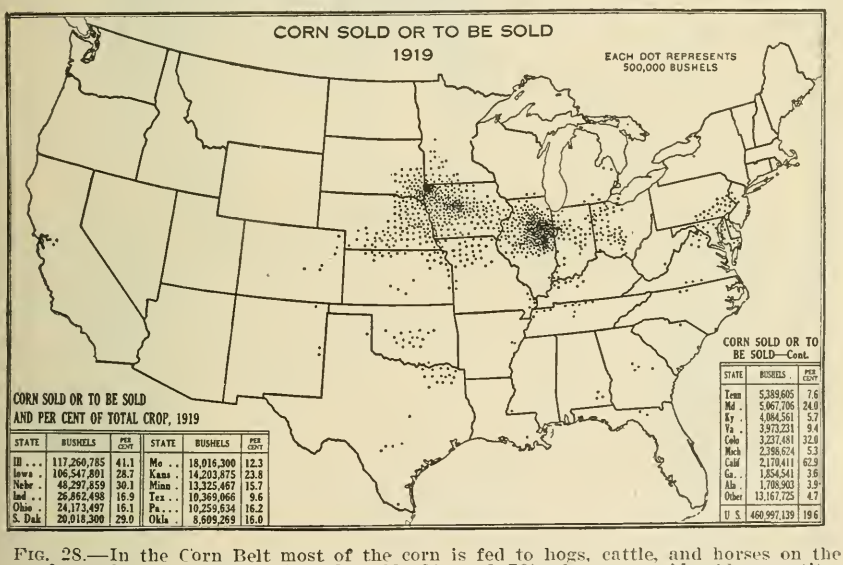
CORN PRODUCTION, 1919, AND PER CENT OF AVERAGE PRODUCTION, 1911-1920

STATE	BUSHELS	PER CENT	STATE	BUSHELS	PER CENT
Iowa	371,362,393	98	Tex..	108,377,282	82
Ill..	285,346,031	85	Minn.	84,786,096	91
Nebr	160,391,314	87	Ky...	71,518,484	75
Ind.	158,603,938	69	Tenn.	70,639,252	84
Ohio	149,844,626	101	S. Dak	69,060,782	82
Mo.	146,342,036	82	Pa...	61,450,012	99

CORN PRODUCTION (Continued)

STATE	BUSHELS	PER CENT
Kans	59,719,831	58
Okla	53,851,093	87
Ga.	51,492,033	80
Mich	45,058,912	82
Wis.	44,547,398	70
Ala.	43,599,100	72
Va.	42,302,978	84
N. C.	40,998,317	73
Miss	38,095,228	63
Other	188,315,371	74
U. S.	2,345,832,507	84

FIG. 27.—Corn is the great American cereal, constituting about 60 per cent of the tonnage of all cereals grown in the United States, and over 50 per cent of the value. More than half of this crop is produced in the Corn Belt; but corn is the leading crop in value also in the Corn and Winter Wheat Belt, and is the all-important cereal in the Cotton Belt. Corn is a very productive crop, yielding, in general, about twice as many pounds of grain per acre as wheat, oats, barley, or rye. The climate and soil of the Corn Belt are peculiarly suited to it. Probably no other area in the world of equal extent produces so much food per square mile as the Corn Belt. (See Figs. 21 and 104.)



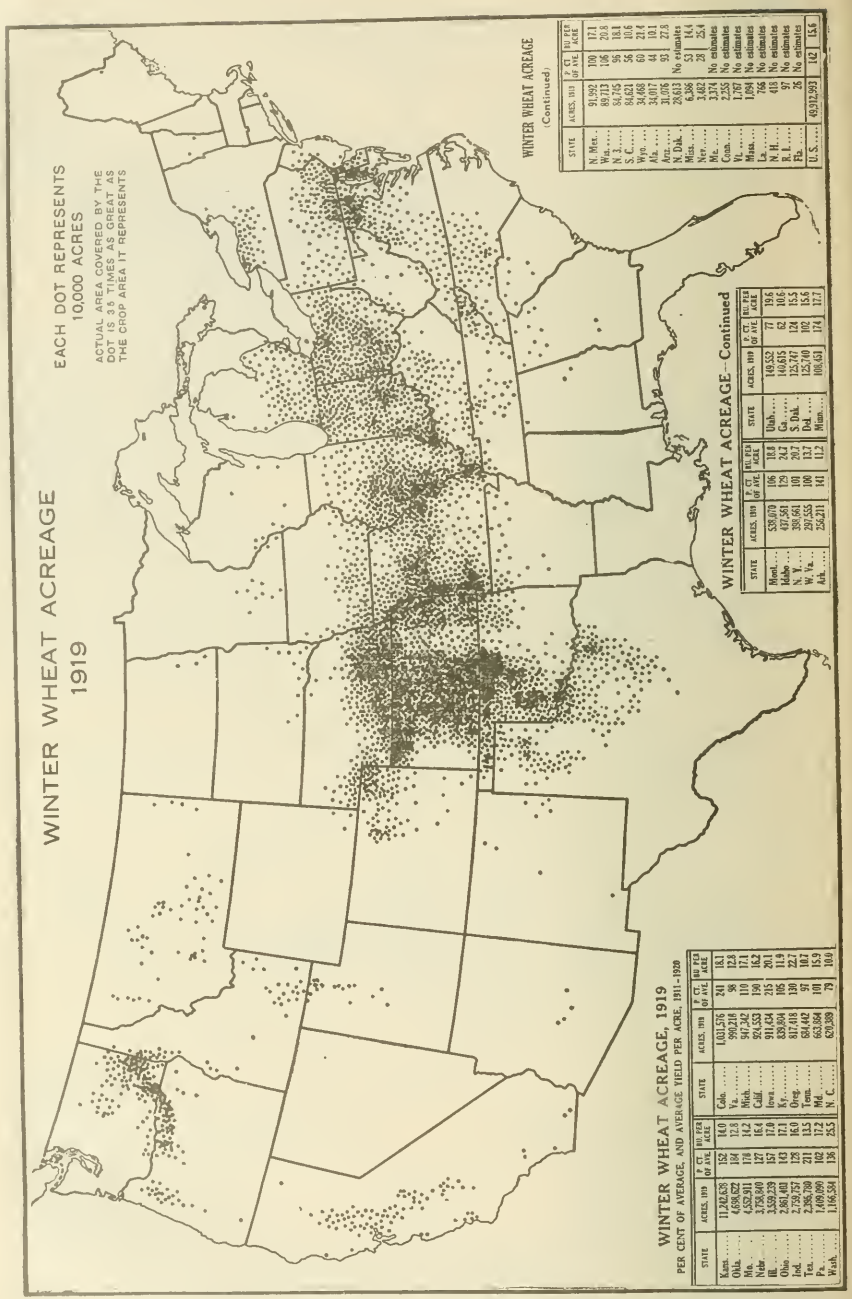
CORN SOLD OR TO BE SOLD AND PER CENT OF TOTAL CROP, 1919

STATE	BUSHELS	PER CENT	STATE	BUSHELS	PER CENT
Ill...	117,260,785	41.1	Mo..	18,016,300	12.3
Iowa.	106,547,801	28.7	Kans.	14,203,875	23.8
Nebr.	48,297,859	30.1	Minn.	13,325,467	15.7
Ind..	26,862,498	16.9	Tex..	10,369,066	9.6
Ohio.	24,173,497	16.1	Pa...	10,259,634	16.2
S. Dak	20,018,300	29.0	Okla.	8,609,269	16.0

CORN SOLD OR TO BE SOLD—Cont.

STATE	BUSHELS	PER CENT
Tenn	5,389,605	7.6
Md.	5,067,706	24.0
Ky.	4,084,561	5.7
Va.	3,973,231	9.4
Colo	3,237,481	32.0
Mich	2,386,624	5.3
Calif	2,170,411	62.9
Ga..	1,854,541	3.6
Ala.	1,708,903	3.9
Other	13,167,725	4.7
U. S.	460,997,139	19.6

FIG. 28.—In the Corn Belt most of the corn is fed to hogs, cattle, and horses on the same farm that it is grown (see figs. 89, 81, and 76); but a considerable quantity, amounting to 41 per cent of the crop in Illinois in 1919, and about 30 per cent in Iowa, South Dakota, and Nebraska, is sold to nearby farmers, is shipped to consumers in the South and East, is exported largely through Chicago and the Atlantic ports, or is made into starch and glucose. The corn which the map indicates as sold from the farms in Pennsylvania, Maryland, and several Southern States, consists mostly of sales to neighboring farmers. Farms near the water front in Maryland and Virginia, however, ship corn by water to Baltimore, whence it is exported.



STATE	ACRES, 1919	P. CT. OF AVE.	BU. PER ACRE
Kans.	11,242,828	152	14.0
Okla.	4,698,022	184	12.8
Mo.	4,552,911	178	14.2
Nebr.	3,726,940	127	16.4
Ill.	3,593,229	157	17.9
Ohio	2,965,374	171	16.1
Ind.	2,729,257	125	16.0
Tex.	2,295,730	211	13.5
Pa.	1,409,090	102	17.2
Wash.	1,166,534	136	25.5
Calif.	1,031,576	241	18.1
Va.	990,218	98	12.8
Mich.	947,242	110	17.1
Calif.	914,533	199	20.2
Iowa	911,414	215	16.3
Ky.	838,954	105	11.9
Oreg.	817,418	130	22.7
Tenn.	694,442	97	10.7
Md.	663,864	101	15.3
N. C.	620,388	79	10.0

STATE	ACRES, 1919	P. CT. OF AVE.	BU. PER ACRE
Mont.	539,079	196	10.8
Idaho	397,561	179	20.7
N. Y.	393,651	101	13.7
W. Va.	297,556	100	13.7
Ark.	256,211	141	11.2
Utah	140,553	77	19.6
Colo.	140,615	62	10.6
S. Dak.	125,747	124	15.5
Del.	125,740	102	15.6
Minn.	108,651	174	17.7

STATE	ACRES, 1919	P. CT. OF AVE.	BU. PER ACRE
N. Mex.	91,592	100	17.1
Wis.	89,713	146	20.5
N. J.	84,215	95	16.1
S. C.	54,753	58	10.5
Wyo.	34,468	60	21.4
Ala.	34,017	44	10.1
Ariz.	31,076	93	27.8
N. Dak.	28,613	No estimates	
Miss.	6,386	51	14.4
Nev.	3,624	25	25.4
Me.	3,121	No estimates	
Conn.	2,255	No estimates	
Vt.	1,787	No estimates	
Mass.	1,094	No estimates	
La.	766	No estimates	
N. H.	418	No estimates	
R. I.	97	No estimates	
Fla.	38	No estimates	
U. S.	49,910,993	142	15.6

FIG. 29.—The Corn and Winter Wheat Belt included 42 per cent of the Nation's acreage of winter wheat in 1919, and 30 per cent more was located in the southern and eastern portion of the Corn Belt. The southern boundary of this winter wheat belt follows the isotherm of 72° during the month preceding harvest (June 15); and although some wheat is grown south of this line, it frequently suffers severe damage from rust. The northern frontier of winter wheat follows, in a general way, the mean winter temperature line of 20°, which extends in a northwesterly direction from northern Illinois and Iowa diagonally across South Dakota and Montana.

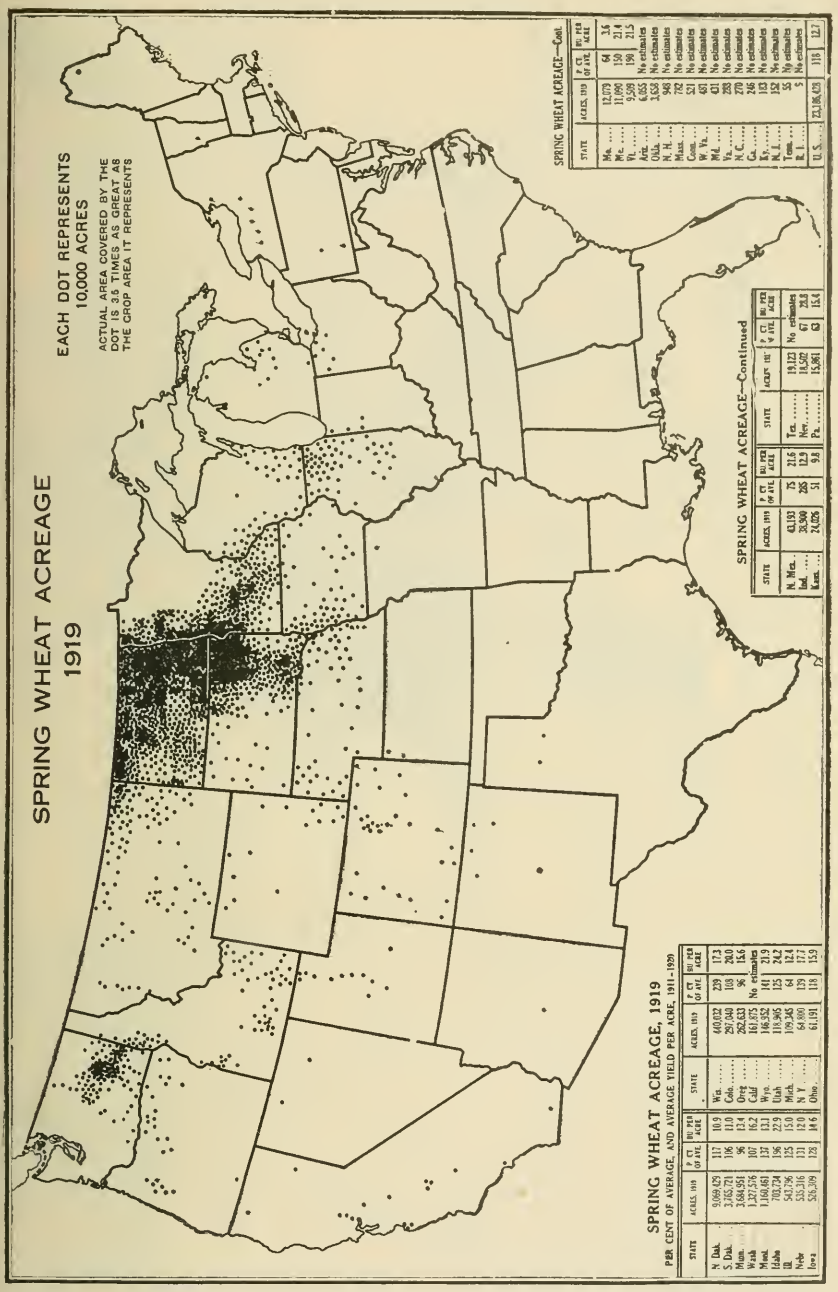


FIG. 30.—About half the acreage of spring wheat in 1919 was in the Spring Wheat Area, where it constituted 40 per cent of the acreage of all crops, and most of the other half was located in the adjoining portion of the Great Plains Region. A secondary but important center of production is located in the subhumid portions of Washington and Oregon. The southern boundary of the Spring Wheat Area is determined largely by the northern boundary of winter wheat, which is, in general, more productive and more profitable where it can be grown. The northern limit of spring wheat is approximately the mean summer temperature of 58°, which is found in the United States only in the western mountains.

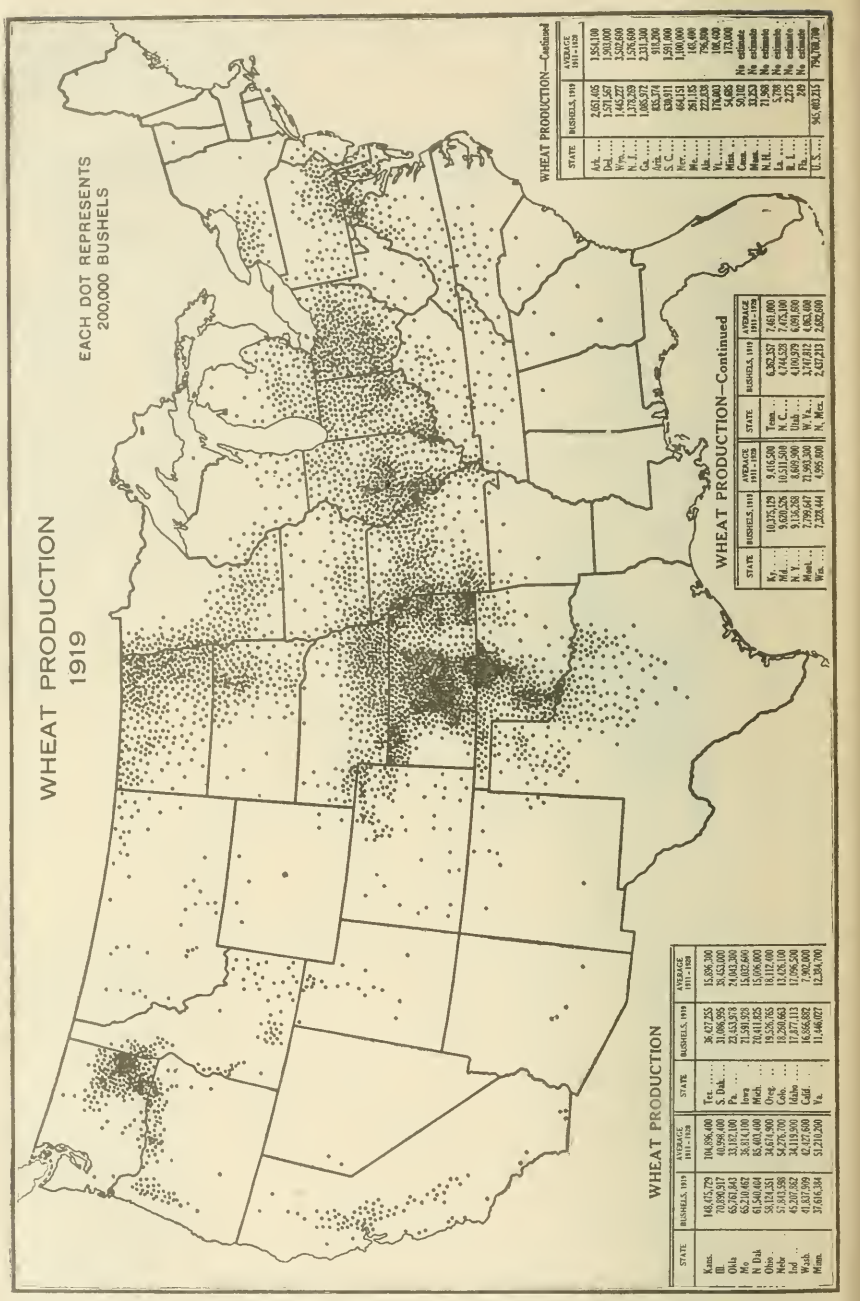


FIG. 31.—The United States produces about one-fifth of the world's wheat, as compared with three-fifths of the world's corn and cotton. The wheat crop of the United States, measured in bushels, is usually from one-fourth to one-third of the corn crop. Half of the wheat crop was grown in six States in 1919. Kansas was the leading State, as usual, but North Dakota, which has often ranked first and is usually second, had a very poor crop in 1919. On the other hand, both acreage and production were unusually large that year in the southern portion of the Corn Belt and northern portion of the Corn and Winter Wheat Region. (See Fig. 2.)

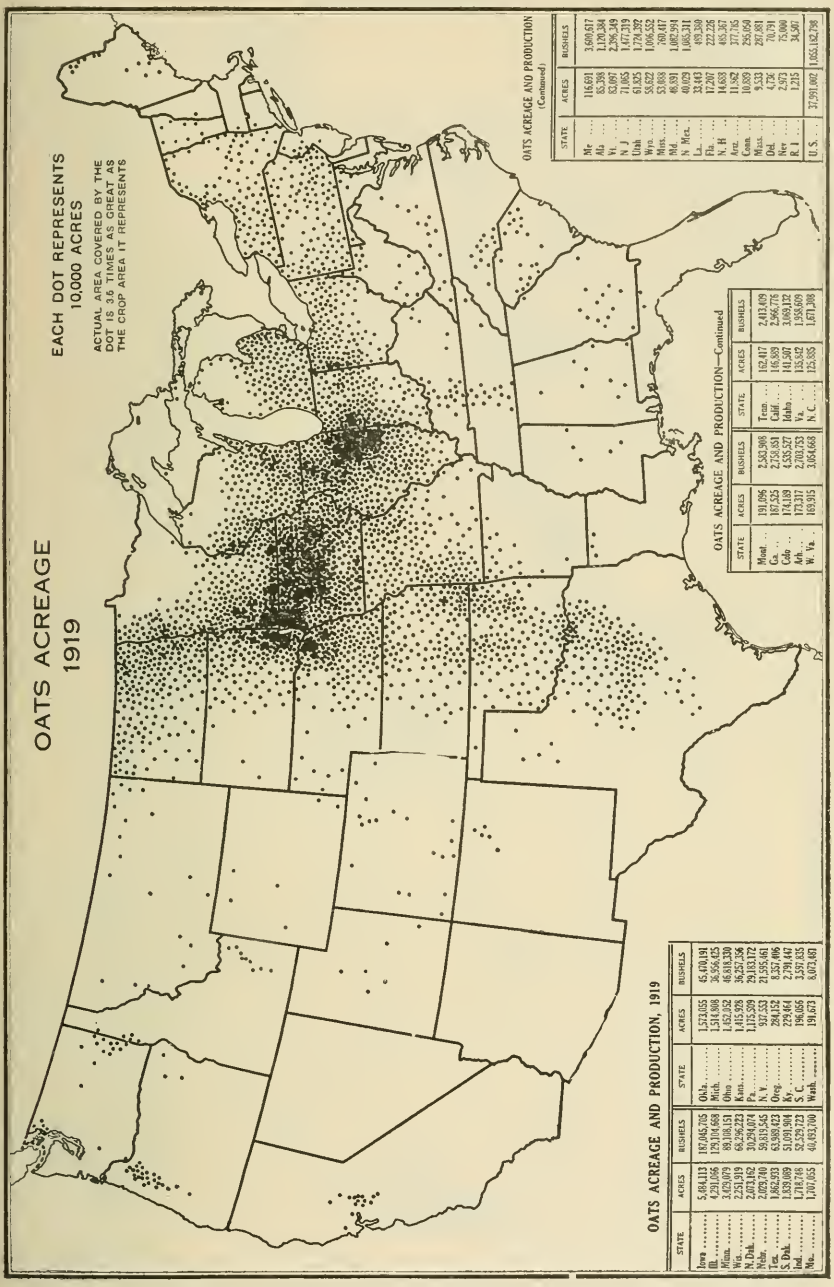
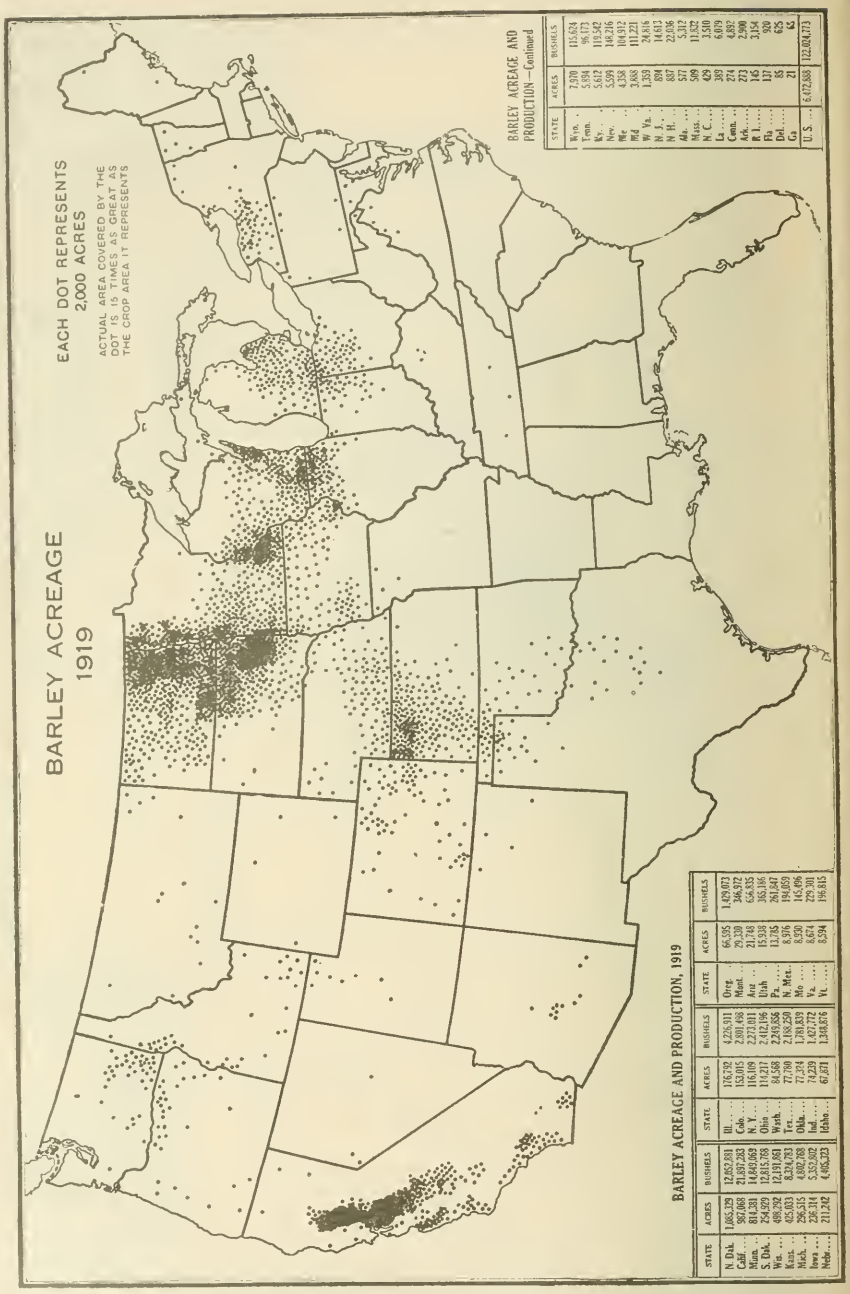
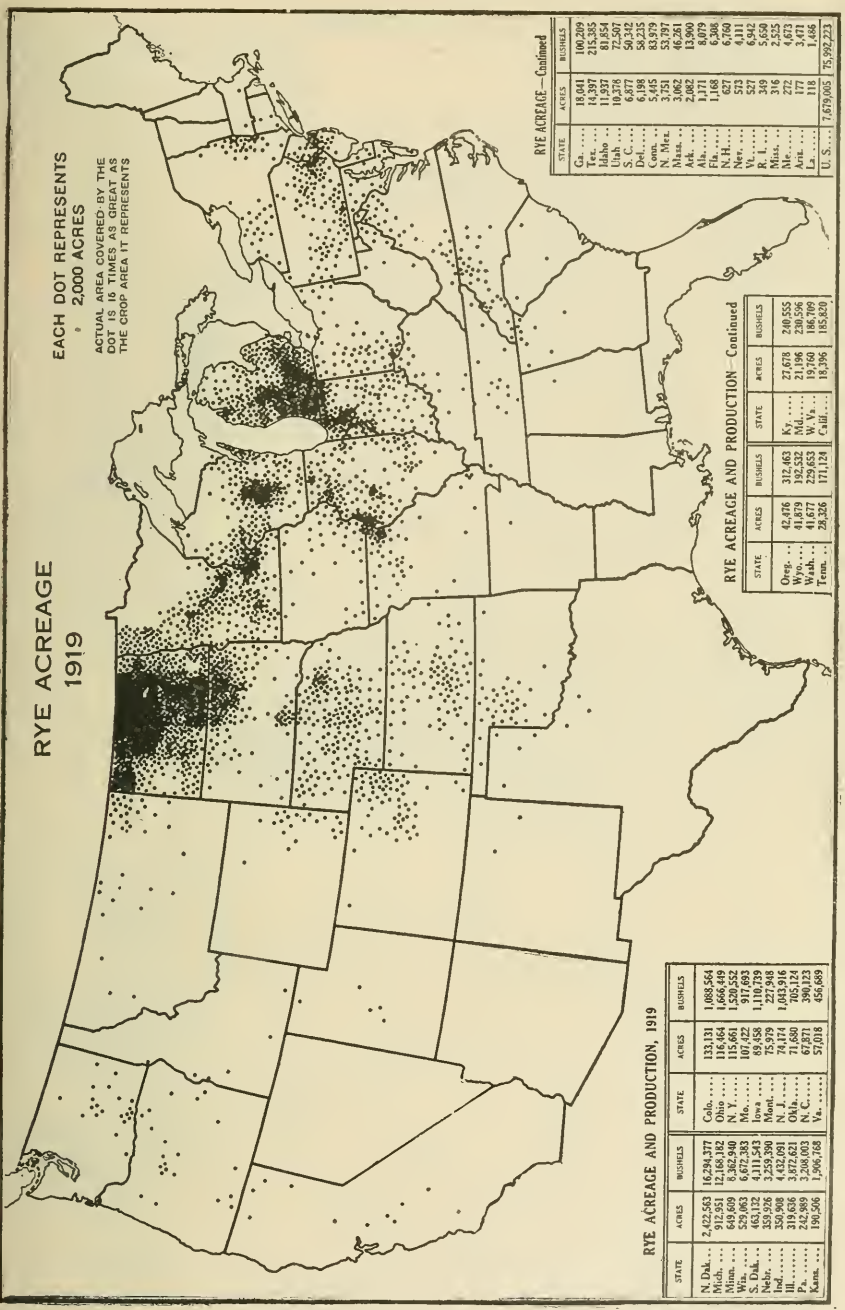


Fig. 32.—The Oat Belt of the United States consists of a crescent-shaped area extending from New England to North Dakota, bounded on the north by the Great Lakes and on the south by the Corn and Winter Wheat Region. An arm extends southwestwardly from this belt across eastern Kansas and Oklahoma to central Texas. Oats prefer a cool, moist climate, and this large acreage in the Corn Belt and southwesterly is owing more to the need of feed for horses, and of a spring grain nurse crop for clover, than to particularly favorable climatic conditions. In the Southern States most of the oats are fall sown, but in the North the oats are sown in the spring.



STATE	ACRES	BUSHELS
N. Dak.	1,865,329	32,057,891
Calif.	387,068	21,857,283
Minn.	814,381	14,405,963
S. Dak.	454,309	12,813,988
Wis.	294,292	8,231,783
Mont.	425,033	8,124,733
Mich.	296,515	4,882,788
Iowa	238,314	5,352,922
Nebr.	211,242	4,405,223
Ill.	176,792	4,228,911
Colo.	153,015	2,991,498
N. Y.	116,109	2,273,191
Oreg.	111,377	2,141,946
Ohio	84,568	2,126,586
Wash.	77,790	2,118,259
Tex.	77,274	1,781,839
Okla.	74,229	1,427,772
Ind.	67,671	1,348,876
Idaho	66,395	1,429,073
Mont.	29,230	586,372
Ariz.	13,148	345,555
Utah	13,593	365,186
Pa.	13,735	261,947
N. Mex.	8,976	194,059
Mo.	8,930	145,096
Va.	6,674	129,301
Vt.	6,594	196,915
Wyo.	7,970	115,624
Tenn.	5,934	96,173
Ky.	5,612	110,542
Nev.	5,558	148,326
Wyo.	4,358	104,912
Md.	3,888	111,221
W. Va.	1,359	24,816
N. J.	894	14,613
N. H.	837	22,036
Ala.	547	5,312
Miss.	509	11,507
La.	389	6,079
Conn.	274	4,887
Ark.	273	2,900
R. I.	145	3,154
Fla.	137	520
Del.	35	425
Ga.	21	252
U. S.	6,672,888	122,804,373

FIG. 33.—It should be noted that a dot on this map represents only one-fifth as much acreage as on the maps of corn, wheat, and oats. Barley is a minor crop in the United States compared with these crops, except in southeastern Wisconsin, southeastern and northwestern Minnesota, the eastern portions of the Dakotas, and the valleys of California. In these five States nearly two-thirds of the Nation's barley acreage is found. Minor centers may be noted on the map in northwestern Kansas, southeastern Michigan, and northwestern New York. These barley districts are characterized by a cool, sunny climate. The crop in California is grown during the winter. Much barley is also sown in California to be cut green for hay (see Fig. 45).



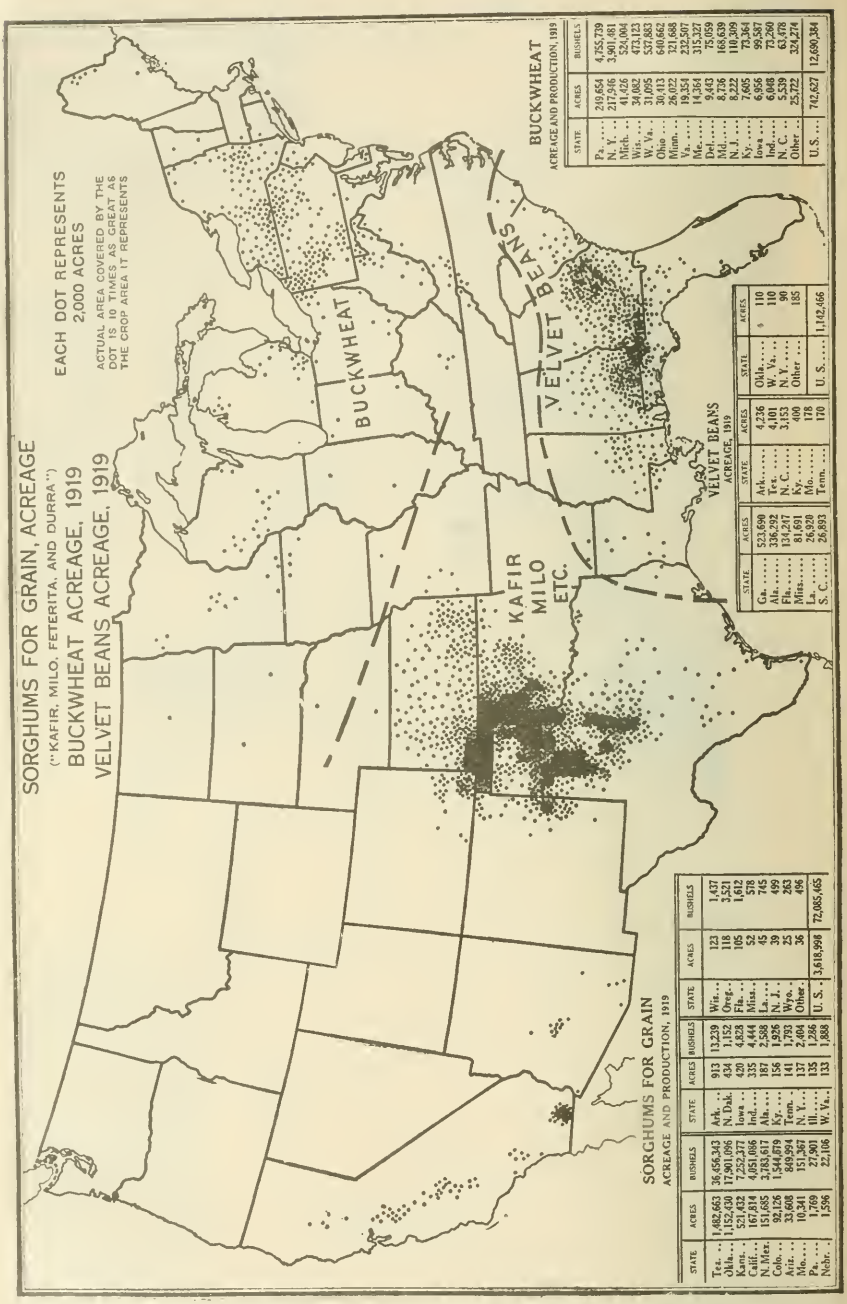
STATE	ACRES	BUSHELS
N. Dak.	2,422,563	16,294,377
Mich.	912,951	12,149,382
Minn.	649,609	8,362,840
Wis.	529,063	6,672,383
S. Dak.	463,112	4,111,543
Nebr.	359,926	3,259,390
Ind.	350,908	4,432,691
Ill.	313,636	3,872,621
Pa.	242,858	3,812,531
Kans.	190,506	1,906,768
Colo.	133,131	1,088,564
Ohio	115,661	1,666,646
N. Y.	115,661	1,520,552
Mo.	107,422	917,693
Iowa	89,458	1,110,739
Mont.	75,979	227,948
N. J.	74,474	1,043,916
Okla.	71,680	705,124
N. C.	67,871	590,123
Va.	57,018	456,669

STATE	ACRES	BUSHELS
Oreg.	42,476	312,463
Wyo.	41,879	192,532
Wash.	41,677	229,653
Tenn.	28,326	171,124
Ky.	27,678	240,555
Md.	21,196	230,596
W. Va.	19,760	186,709
Calif.	18,396	185,820

STATE	ACRES	BUSHELS
Ga.	18,041	100,209
Tex.	14,397	215,385
Idaho	11,937	81,854
Utah	10,378	72,507
S. C.	6,877	50,342
Del.	6,198	58,235
Conn.	5,445	83,979
N. Mex.	3,751	52,287
Nev.	3,062	46,281
Ark.	2,082	13,990
Ala.	1,171	8,079
Fla.	1,168	6,308
N. H.	627	6,760
Nev.	573	4,111
Vt.	527	6,942
R. I.	349	2,650
Miss.	316	2,535
Me.	272	4,613
Ariz.	177	3,471
La.	118	1,486
U. S.	7,679,005	75,992,223

FIG. 34.—Rye acreage in North Dakota increased from 48,000 in 1909 to 2,422,000 in 1919. This acreage in North Dakota in 1919 was almost one-third of the total in the United States, although, owing to an unfavorable season, the production was little greater than in Michigan. Rye heretofore has been grown mostly in the sandy sections of the Lake States, and this sudden extension of production onto the subhumid lands of the Spring Wheat and Great Plains regions is an interesting and probably significant development. The acreage of rye in the United States in 1919 was much greater than ever before, exceeding, even, the acreage of barley, but has declined nearly half during the past two years.

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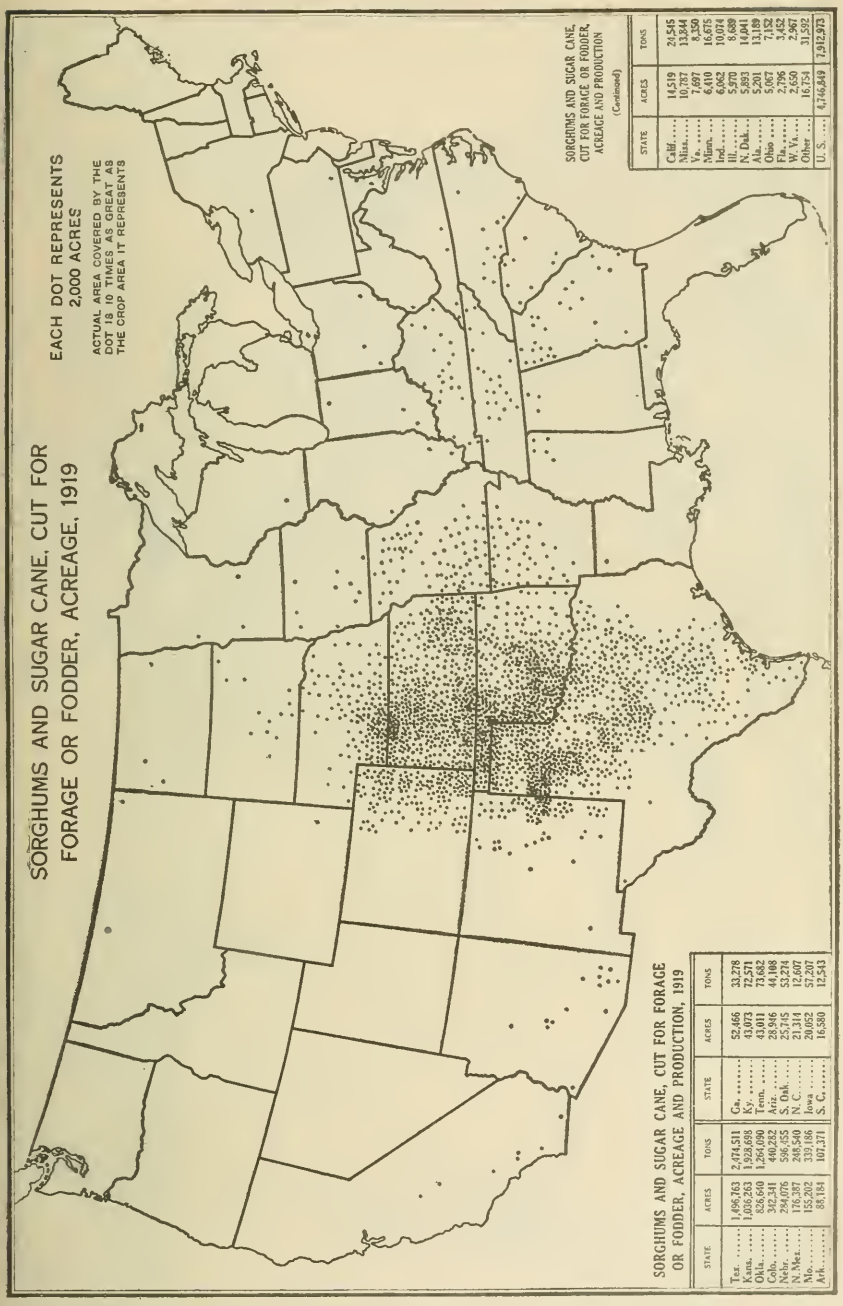
STATE	ACRES	BUSHELS
Tex.	1,482,663	36,456,343
Okla.	1,152,430	17,901,096
Kans.	521,432	7,252,377
Calif.	167,814	4,051,066
N. Mex.	151,685	3,783,817
Colo.	92,126	1,544,879
Ariz.	33,468	1,490,904
Mo.	10,341	151,367
Pa.	1,769	27,901
Nebr.	1,596	22,106
Ark.	913	13,239
N. Dak.	434	1,152
Iowa	420	4,828
Ind.	335	4,444
Ala.	187	2,588
Ky.	156	1,985
Tenn.	141	1,793
Other	137	2,404
N. Y.	133	1,888
Ill.	135	1,286
W. Va.	133	1,888
Wis.	123	1,437
Oreg.	118	3,521
Fla.	105	1,612
Miss.	52	578
La.	45	745
N. J.	39	496
Wash.	25	263
Other	36	496
U. S.	3,618,998	72,065,465

STATE	ACRES
Ga.	523,690
Ala.	336,252
Fla.	134,247
Miss.	81,691
La.	26,920
S. C.	26,893
Ark.	4,236
Tex.	4,101
N. C.	3,153
Ky.	400
Mo.	178
Tenn.	170
Okla.	110
W. Va.	110
N. Y.	90
Other	185
U. S.	1,142,466

STATE	ACRES	BUSHELS
Pa.	219,654	4,755,739
N. Y.	217,946	3,901,881
Mich.	41,426	520,004
Wis.	37,427	617,121
W. Va.	31,005	537,883
Ohio	30,413	640,662
Minn.	28,022	321,688
Va.	19,354	232,507
Me.	14,364	315,327
Del.	9,443	75,059
Md.	8,236	168,639
N. J.	7,727	113,910
N. C.	7,605	73,364
Iowa	6,956	99,587
Ind.	6,048	73,260
N. C.	5,539	63,478
Other	25,722	324,274
U.S.	742,627	12,690,384

FIG. 35.—The grain sorghums are, perhaps, our most drought-resistant crops. The expansion of acreage during the past two decades in the southern Great Plains area has been extraordinary. From 1899 to 1909 the acreage in the United States increased from 266,000 to 1,635,000, or sixfold, and between 1909 and 1919 it more than doubled. Buckwheat, which is practically confined to the Appalachian area and the Lake States, has decreased slightly in acreage since 1909. It is peculiarly adapted to districts having cool, moist summers and sour soils.

The velvet bean, grown as a forage crop, has increased greatly its acreage in the Southeastern States, where the boll weevil has discouraged cotton growers and awakened interest in live-stock production. (See Figs. 22 and 81.)



STATE	ACRES	TONS
Calif.	14,519	24,545
Nebr.	10,787	13,334
Va.	7,687	8,359
Minn.	6,410	16,675
Ind.	6,062	10,074
Ill.	5,970	8,689
N. Dak.	5,893	14,041
Ala.	5,201	13,189
Ohio	5,067	7,152
Fla.	3,796	3,452
W. Va.	2,650	2,967
Other	16,754	31,592
U. S.	4,746,849	7,912,973

STATE	ACRES	TONS	STATE	ACRES	TONS
Tex.	1,496,763	2,474,511	Ga.	52,466	33,278
Kans.	1,036,263	1,923,688	Ky.	43,073	72,571
Okla.	826,640	1,264,090	Tenn.	43,011	73,682
Colo.	342,341	440,282	Ariz.	28,946	44,108
Nebr.	294,076	536,955	S. Dak.	25,745	53,274
N. Mex.	176,387	248,540	N. C.	21,314	12,607
Miss.	170,185	155,202	Iowa	20,155	37,203
Ark.	88,184	107,371	S. C.	16,580	12,543

FIG. 36.—The sorghums are grown for forage much farther north than for grain; while the sweet sorghums, which are not commonly grown for grain, are frequently used for forage far to the east in the Cotton Belt and the Corn and Winter Wheat regions. The acreage of sorghums for forage is larger than the acreage for grain, especially in Kansas, where some sorghum is used for silage (see Fig. 25). It is interesting to note that the average yield per acre of sorghum forage was 1.7 tons in 1919, as compared with less than 1 ton per acre for corn in this area, and 1.2 tons for corn in the entire United States. The sorghums, apparently, yield more forage per acre in this semiarid area than corn in the humid regions.

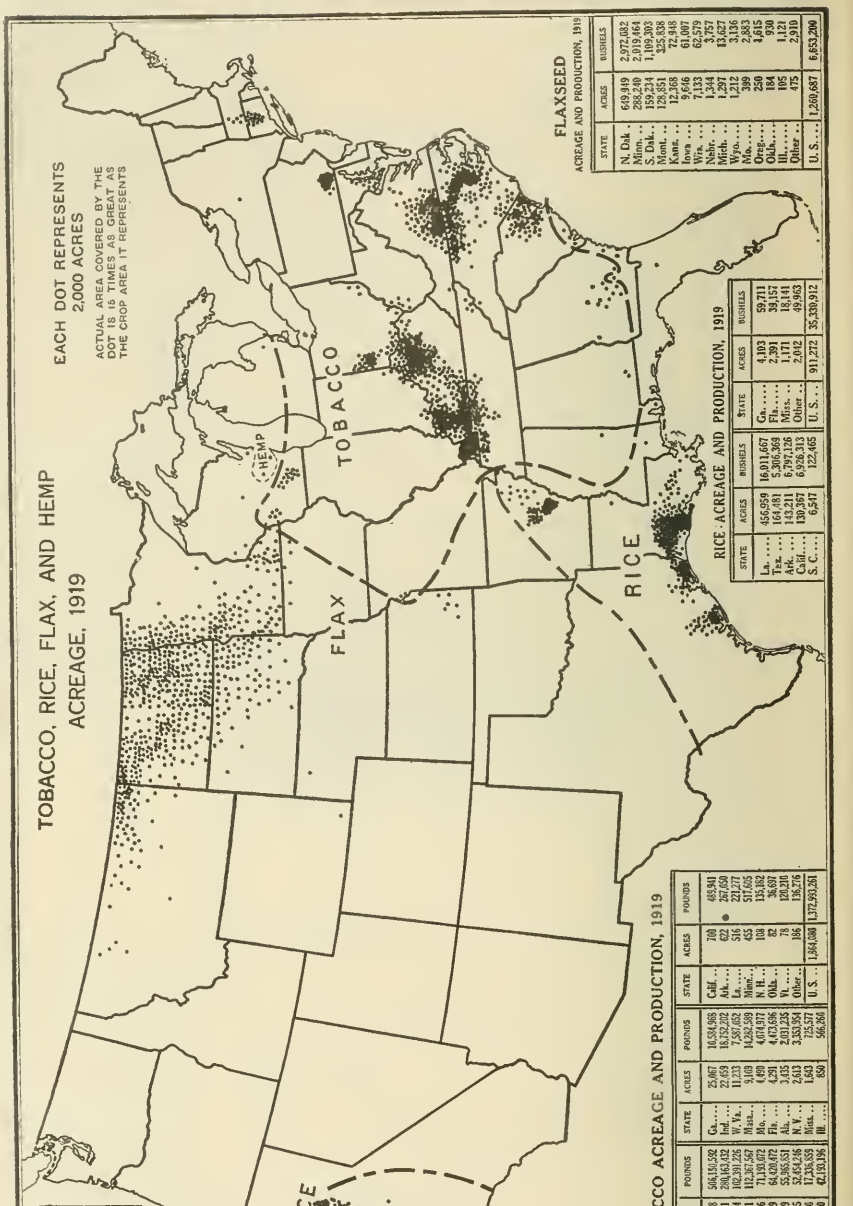
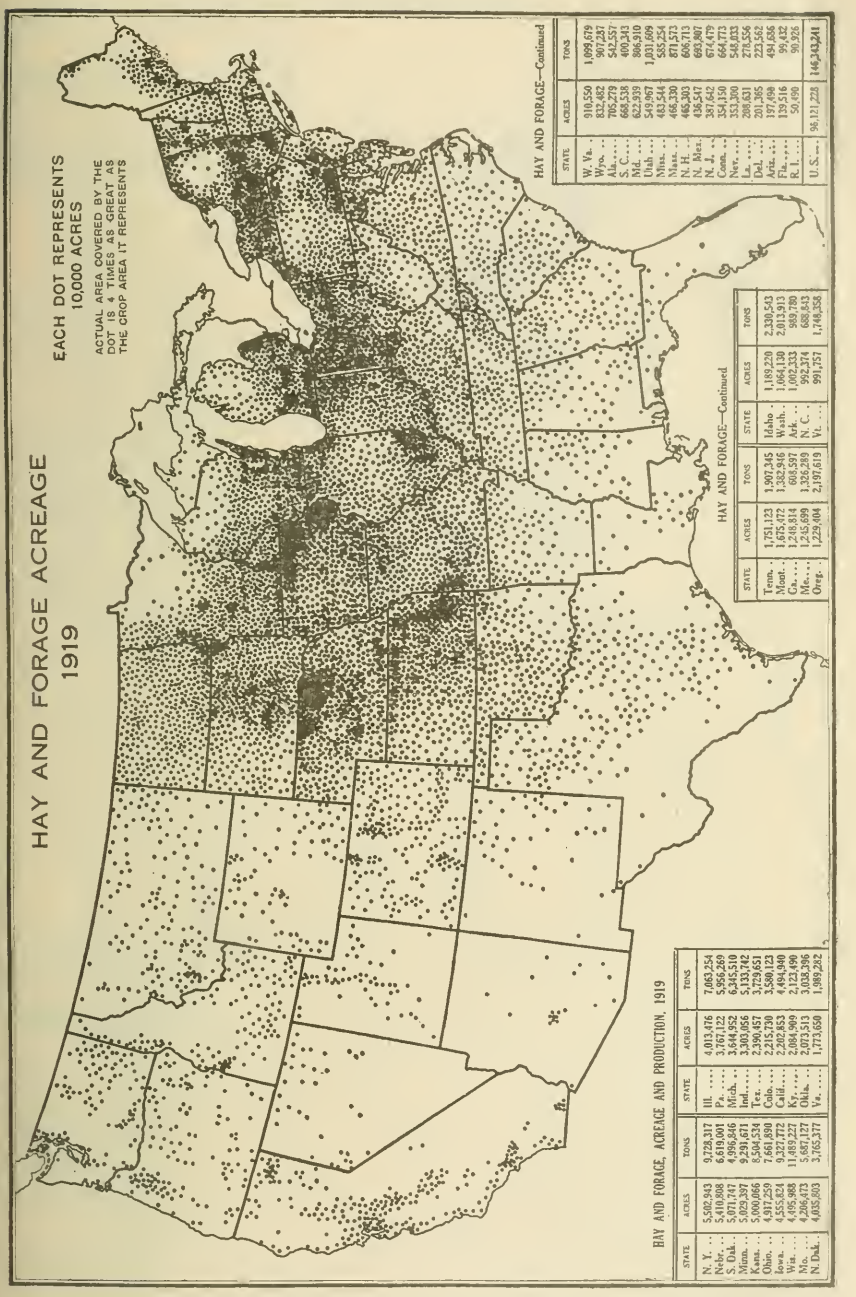


FIG. 37.—Nearly 90 per cent of the tobacco acreage is in six States—Kentucky, North Carolina, Virginia, Tennessee, South Carolina, and Ohio. But there are also important centers of production, especially of certain types, in southern Maryland, in Lancaster County, Pa., in the Connecticut Valley, and in southern Wisconsin. Tobacco is very sensitive to soil conditions, but these requirements vary with the different types.

Rice production is now largely confined to the coastal prairies of Louisiana and Texas, the prairie district of eastern Arkansas, and the flat valley of the Sacramento in California, all areas of heavy subsoils which hold the irrigation water.

Flax is grown in the Spring Wheat and Northern Great Plains Areas. Nearly half of the hemp is raised in Wisconsin.

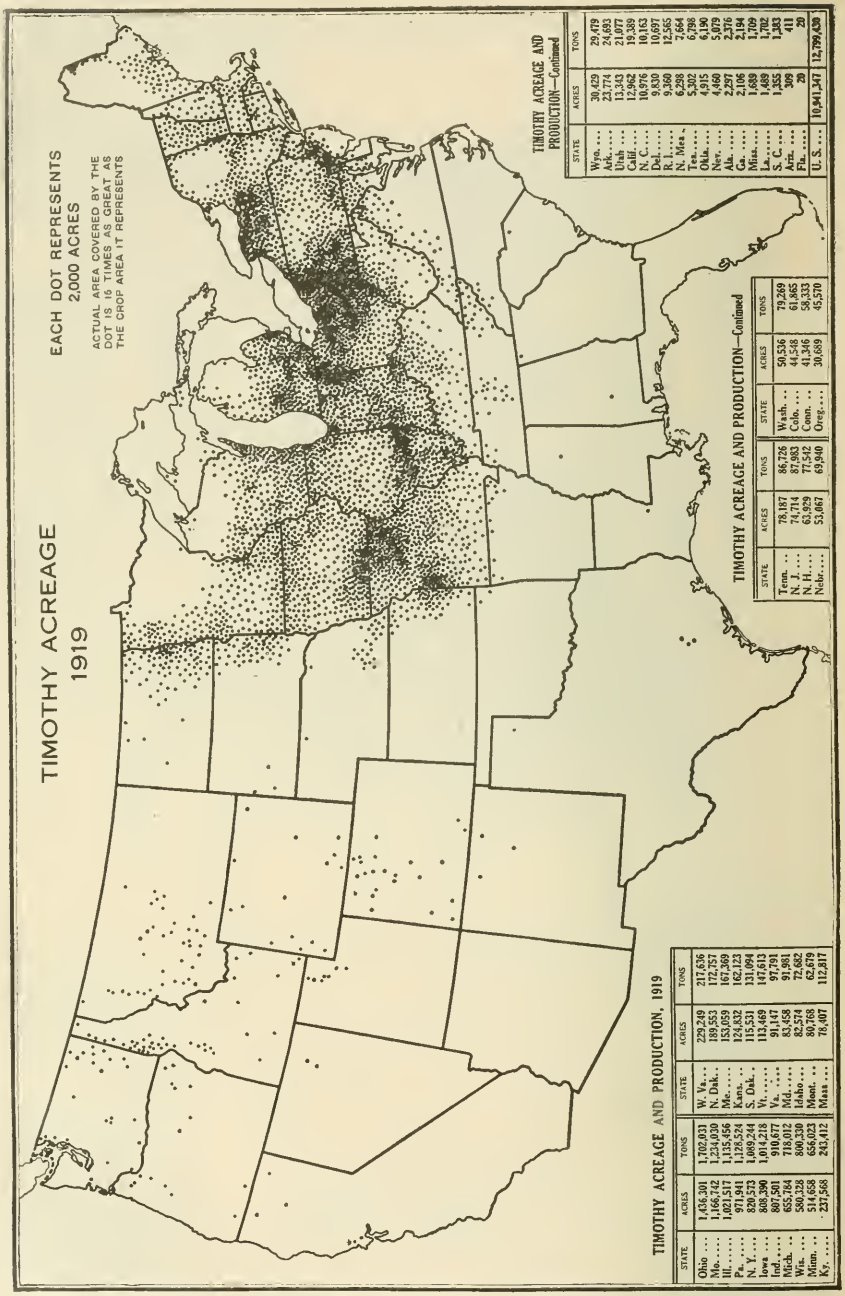


STATE	ACRES	TONS	STATE	ACRES	TONS
N. Y.	5,582,943	9,728,317	Ill.	4,013,476	7,063,254
Nebr.	5,410,808	6,619,001	Pa.	3,767,122	5,956,269
S. Dak.	5,071,747	4,996,946	Mich.	3,644,952	6,345,510
Minn.	5,029,397	9,291,611	Ind.	3,303,056	5,133,742
Kans.	5,000,066	5,504,534	Tex.	2,390,457	3,729,651
Ohio	4,917,259	7,661,809	Colo.	2,215,730	3,580,123
Iowa	4,811,227	9,181,272	Calif.	2,062,953	4,194,940
Wis.	4,495,988	11,489,776	Ky.	1,823,169	3,303,703
Mo.	4,206,473	5,687,127	Okla.	2,073,513	3,038,396
N. Dak.	4,035,803	3,765,377	Va.	1,773,650	1,989,282

STATE	ACRES	TONS	STATE	ACRES	TONS
Tenn.	1,751,123	1,907,345	Idaho	1,189,220	2,330,543
Mont.	1,675,372	1,582,546	Wash.	1,064,130	2,013,393
Ga.	1,315,211	1,502,587	Miss.	1,042,333	969,703
Me.	1,245,699	1,326,399	N. C.	992,374	688,843
Oreg.	1,229,404	2,197,619	Vt.	991,757	1,748,358

STATE	ACRES	TONS
W. Va.	910,550	1,099,679
Wyo.	832,462	907,257
R. I.	705,219	940,337
S. C.	668,538	640,743
Md.	622,939	806,910
Utah	549,967	1,031,609
Minn.	483,544	585,254
Nebr.	466,330	671,573
N. H.	465,303	606,713
N. Mex.	336,547	695,807
Conn.	354,162	644,779
Nev.	353,300	548,033
La.	208,631	278,556
Del.	201,305	223,562
Ariz.	197,498	494,686
Fla.	139,516	99,432
R. I.	50,490	90,926
U. S.	96,121,228	146,343,241

FIG. 38.—This map of hay and forage includes not only the hay crops but also corn and the sorghums cut for silage or fodder and root crops used for forage—13 items in all in the census schedule, of which 8 are shown in the following maps, and 3 have already been shown (figs. 25, 26, and 36). The hay and forage acreage, it will be noted, is largely concentrated in the Hay and Pasture Region and around the margin of the Corn Belt, the greatest State acreage being found in New York and the greatest tonnage production in Wisconsin. Relative to the acreage in crops, however, hay and forage is most important in the Rocky Mountain Region, where it occupies 55 per cent of the crop land.

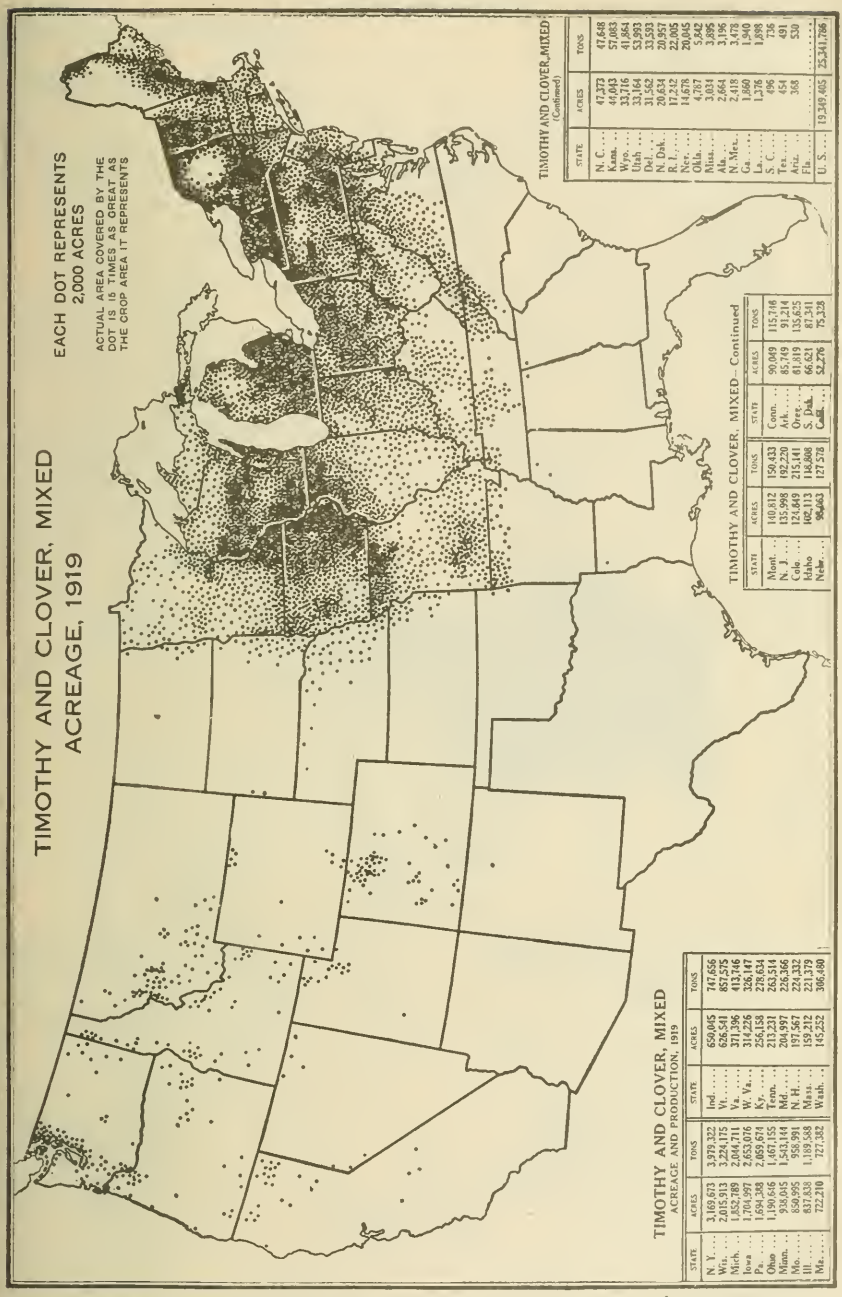


STATE	ACRES	TONS	STATE	ACRES	TONS
Ohio	1,458,301	1,702,031	W. Va.	289,249	217,686
Mo.	1,161,742	1,215,450	Wash.	283,553	172,757
Ill.	1,107,150	1,251,560	Mont.	153,059	167,369
Pa.	971,941	1,128,524	Kans.	124,832	162,123
N. Y.	820,573	1,009,244	S. Dak.	115,531	131,094
Iowa	808,390	1,014,218	Vt.	113,469	147,613
Ind.	807,501	910,677	Va.	91,147	97,791
Mich.	655,784	718,012	Md.	83,458	91,981
Wis.	580,328	690,320	Idaho	81,774	72,422
Minn.	567,151	687,538	Maine	80,268	62,679
Ky.	237,568	243,412	Mass.	78,407	112,817

STATE	ACRES	TONS	STATE	ACRES	TONS
Tenn.	78,187	86,726	Wash.	50,536	79,289
N. J.	74,714	87,983	Colo.	44,548	61,865
N. H.	63,929	77,542	Conn.	41,346	58,333
Nebr.	53,067	69,940	Oreg.	30,689	45,570

STATE	ACRES	TONS
Wyo.	30,429	29,479
Ark.	23,774	24,693
Utah	13,343	21,077
Calif.	12,942	19,389
D. C.	10,975	10,853
Del.	9,830	10,697
R. I.	9,360	12,585
N. Mex.	6,238	7,664
Tex.	5,302	6,798
Okla.	4,915	6,190
Nev.	4,460	5,079
Ida.	2,597	2,174
Ariz.	2,158	2,158
Miss.	1,689	1,709
La.	1,489	1,702
S. C.	1,355	1,383
Ariz.	309	411
Fla.	20	20
U. S.	10,941,547	12,799,430

FIG. 39.—Timothy is practically confined to the northeastern quarter of the United States, except for a scattered acreage in the moister districts of the Rocky Mountain Region. The western margin of the timothy acreage in the Dakotas, Nebraska, and Kansas marks the beginning of the "Black-earth" belt, where lime has accumulated in the subsoil, of dense alfalfa acreage, and of dry-farming practices (see Figs. 6, 42, and 103). The southern boundary of timothy follows approximately the line of 200 days in the frost-free season, or 77° mean summer temperature. The districts of densest production in northern Missouri, southern Illinois, eastern Ohio, and western Pennsylvania have, in general, rather heavy and slightly sour soils.

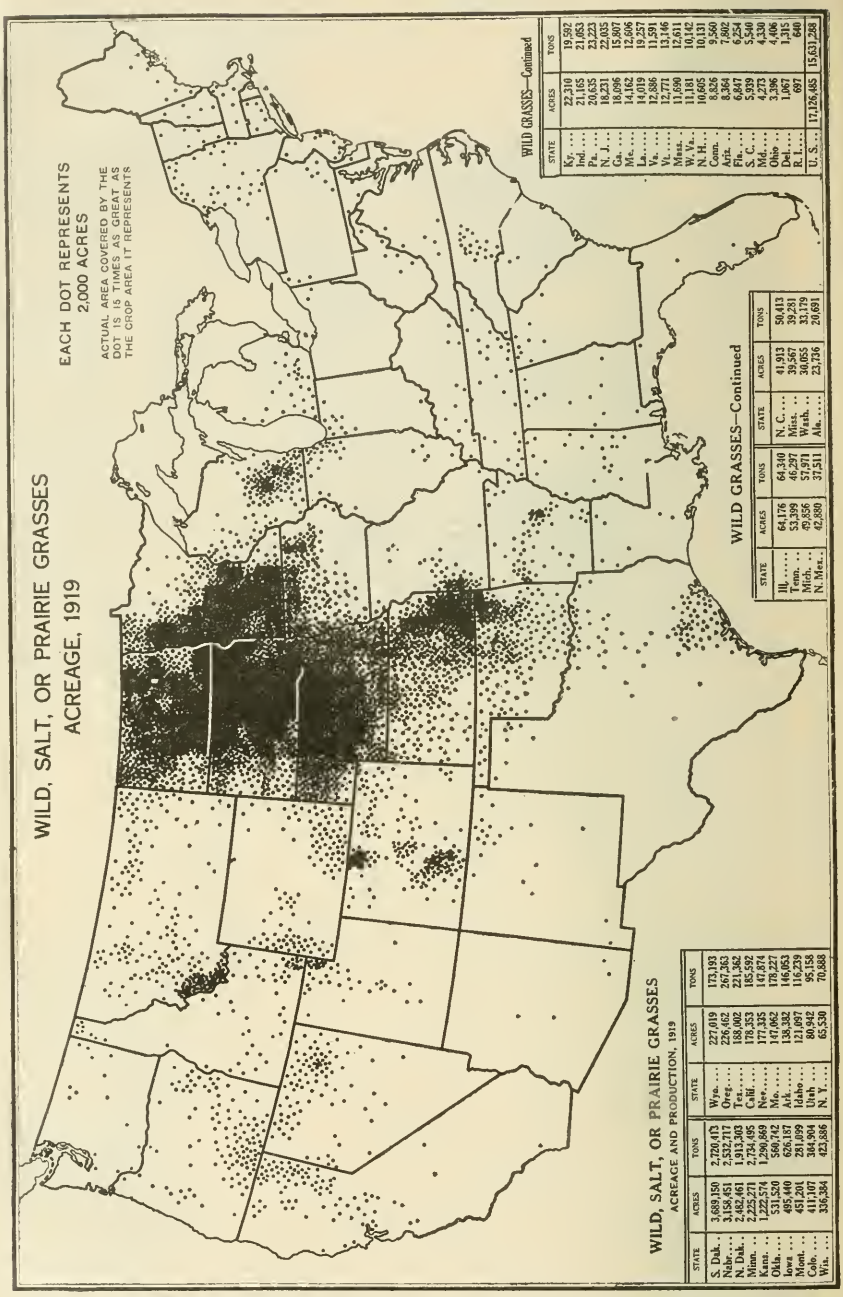


STATE	ACRES	TONS	STATE	ACRES	TONS
N. Y.	3,169,673	3,979,322	Ind.	650,045	747,556
Wis.	2,015,913	3,224,175	Vt.	626,541	857,575
Mich.	1,852,789	2,044,711	Va.	371,396	413,746
Iowa	1,704,997	2,653,076	W. Va.	314,226	326,147
Pa.	1,694,308	2,095,674	Ky.	256,158	238,634
Ohio	1,190,455	1,417,955	Tenn.	233,231	214,144
Minn.	938,915	1,543,144	Md.	204,997	253,566
Mo.	850,995	958,991	N. H.	197,567	224,332
Ill.	837,838	1,189,588	Mass.	159,212	221,379
Me.	722,210	727,382	Wash.	145,252	306,480

STATE	ACRES	TONS	STATE	ACRES	TONS
Mont.	140,812	150,432	Conn.	90,049	115,718
N. J.	135,998	192,220	Ark.	85,749	91,214
Colo.	124,649	215,141	Oreg.	61,819	135,625
Idaho	102,113	148,808	S. Dak.	66,621	81,341
Nebr.	96,063	127,578	Calif.	52,776	75,328

STATE	ACRES	TONS
N. C.	47,373	47,648
Kans.	41,043	57,083
Wyo.	33,716	41,864
Utah	33,164	53,993
Del.	31,562	33,593
N. Dak.	30,634	29,957
R. I.	16,212	20,195
Nev.	14,678	20,045
Okla.	4,787	5,842
Miss.	3,034	3,895
Ala.	2,664	3,196
N. Mex.	2,418	3,478
Ga.	1,660	1,940
La.	1,376	1,298
S. C.	1,196	738
Tex.	454	491
Ariz.	368	530
Fla.		
U. S.	19,340,465	25,341,786

FIG. 40.—The acreage of timothy and clover mixed extends a little farther south and is somewhat more important in the West, especially in the North Pacific Region, than that of timothy alone. Clover is not as well adapted as timothy to heavy or sour soils, consequently, timothy and clover mixed is more important on the better soils—in southeastern Pennsylvania, western Ohio, southern Michigan, northwestern Illinois, and Iowa. In these sections timothy and clover commonly constitute the third year and sometimes the fourth year also, in a rotation, following corn and wheat or oats. About two-thirds of the acreage of timothy and clover mixed is in the Hay and Pasture Region. Compare with map of cotton acreage (Fig. 22) and of clover (Fig. 43).



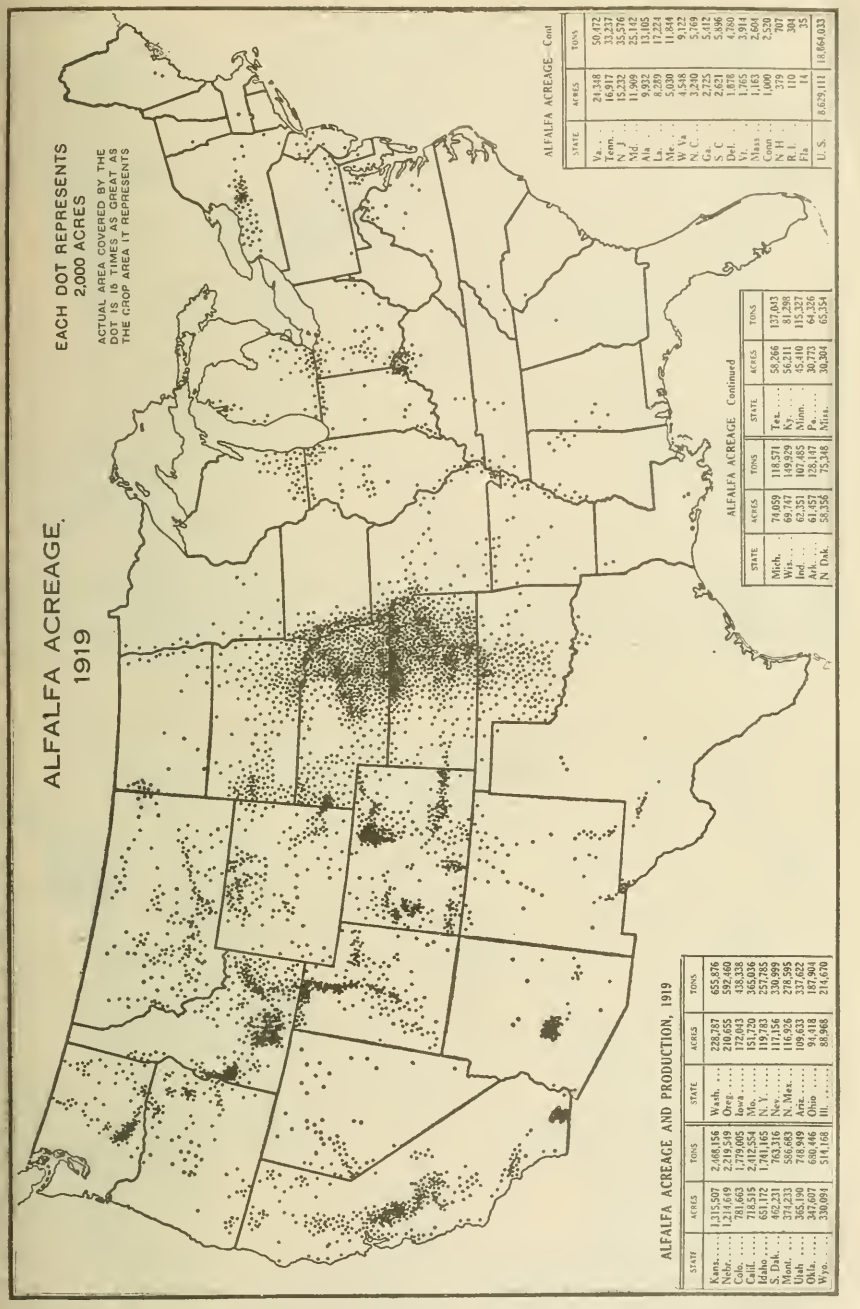
STATE	ACRES	TONS
S. Dak.	3,689,150	2,720,107
Nebr.	3,537,411	2,732,317
N. Dak.	2,482,461	1,911,343
Minn.	2,225,271	2,734,495
Kans.	1,222,574	1,290,869
Okla.	531,520	560,742
Iowa	495,440	626,187
Mont.	451,201	284,099
Colo.	415,487	330,970
Wis.	336,384	423,866
Wyo.	227,019	173,193
Ore.	226,462	267,263
Tex.	188,002	221,582
Calif.	178,353	185,592
Nev.	177,335	147,874
Mo.	147,062	170,227
Ark.	138,382	146,653
Idaho	116,997	114,579
Utah	80,942	95,158
N. Y.	65,530	70,888

STATE	ACRES	TONS
Ky.	22,310	19,592
Ind.	21,165	21,653
Pa.	20,635	23,223
N. J.	18,231	22,035
Ga.	18,096	15,807
Ariz.	14,142	12,598
La.	14,019	19,257
Va.	12,886	11,591
Vt.	12,771	13,146
Mass.	11,690	12,611
W. Va.	11,181	10,142
N. H.	10,605	10,131
Conn.	9,158	9,151
Fla.	6,847	6,254
S. C.	5,939	5,540
Md.	4,273	4,330
Ohio	3,396	4,406
Del.	1,067	1,315
R. I.	597	840
U. S.	17,126,485	15,631,288

STATE	ACRES	TONS
Ill.	64,176	64,340
Tenn.	53,399	46,297
Mich.	49,856	57,971
N. Mex.	42,880	37,511

STATE	ACRES	TONS
N. C.	41,913	50,413
Miss.	39,567	39,281
Wash.	30,055	33,179
Ala.	23,736	20,691

FIG. 41.—The acreage of wild or prairie hay is found mostly in the Spring Wheat Area, the western margin of the Corn Belt and Corn and Winter Wheat Region, and the eastern portion of the Great Plains; in brief, in the northern part of the subhumid belt. East of this belt the moister climate permits the cultivation of timothy and clover, which are more productive (see Figs. 39 and 40); and west of this belt the climate is so dry that the grass normally does not grow high enough to cut (see Figs. 4 and 7). The acreage shown in Wisconsin is mostly marsh hay and that in the Western States is located largely in moist mountain valleys or on high plateaus (see Fig. 3).

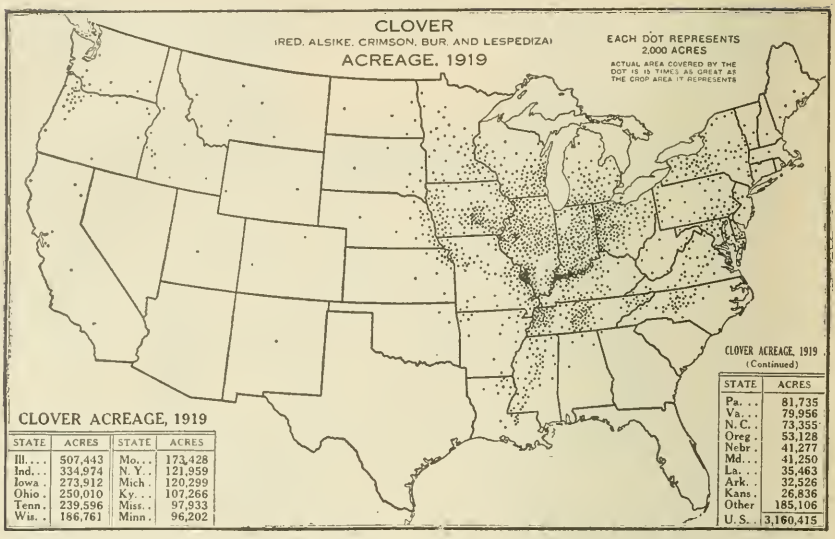


STATE	ACRES	TONS	STATE	ACRES	TONS
Kans.	1,315,507	2,468,156	Wash.	228,787	655,876
Nebr.	1,214,619	2,219,549	Oreg.	210,655	592,460
Colo.	781,663	1,779,905	Iowa	172,043	438,338
Calif.	718,515	2,412,554	Mo.	151,720	365,036
Idaho	651,172	1,741,165	N. Y.	119,783	257,785
S. Dak.	462,231	763,316	Nev.	117,356	330,999
Mont.	417,253	586,603	N. Mex.	116,765	317,255
Utah	385,133	1,105,299	Ind.	108,853	187,522
Okla.	347,607	680,446	Ohio	94,418	187,904
Wyo.	330,091	514,168	Ill.	88,968	214,670

STATE	ACRES	TONS	STATE	ACRES	TONS
Mich.	74,059	118,571	Tex.	58,266	137,043
Wis.	69,747	149,329	Ky.	57,411	81,398
Minn.	67,145	140,945	Kans.	56,410	115,327
Ark.	61,457	128,147	Pa.	30,775	64,326
N. Dak.	58,356	75,348	Miss.	30,304	65,354

STATE	ACRES	TONS
Va.	24,348	50,472
Tenn.	16,917	33,237
N. J.	15,232	35,576
Md.	11,999	23,107
Ga.	9,892	13,102
La.	8,289	17,224
Me.	5,030	11,844
W. Va.	4,548	9,122
N. C.	3,290	5,769
Ga.	2,725	5,412
S. C.	2,621	5,856
Del.	1,875	2,700
Vt.	1,765	3,911
Mass.	1,163	2,604
Conn.	1,000	2,520
N. H.	379	707
R. I.	110	304
Fla.	14	35
U. S.	8,629,111	18,664,033

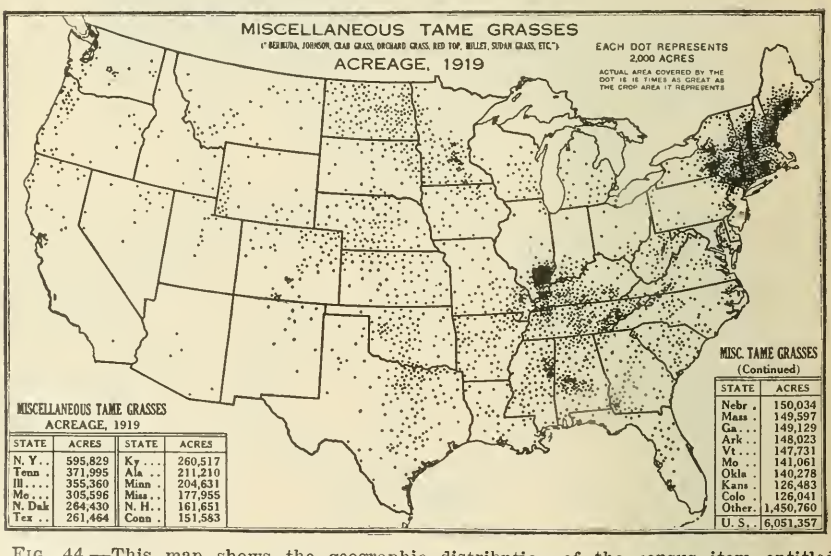
FIG. 42.—Alfalfa demands soils that are not acid, and it is most easily cured in a climate that is not rainy during the summer. Consequently, it thrives best in the Western States, where it is grown mostly under irrigation, and fairly well in the limestone sections of the East, where its culture is increasing rapidly. This increase has been notable in the slightly subhumid section of eastern Kansas and Nebraska, where the acreage has increased over sixfold in the past 20 years. Alfalfa replaces wild hay in this area as the major hay crop. Seven-eighths of the alfalfa acreage is west of the Missouri River (see Figs. 4, 6, and 16).



STATE	ACRES	STATE	ACRES
Ill.	507,443	Mo.	173,428
Ind.	334,974	N. Y.	121,959
Iowa	273,912	Mich.	120,299
Ohio	250,010	Ky.	107,266
Tenn.	239,596	Miss.	97,933
Wis.	186,761	Minn.	96,202

STATE	ACRES
Pa.	81,735
Va.	79,956
N. C.	73,355
Oreg.	53,128
Nebr.	41,277
Md.	41,250
La.	35,463
Ark.	32,526
Kans.	26,836
Other	185,106
U. S.	3,160,415

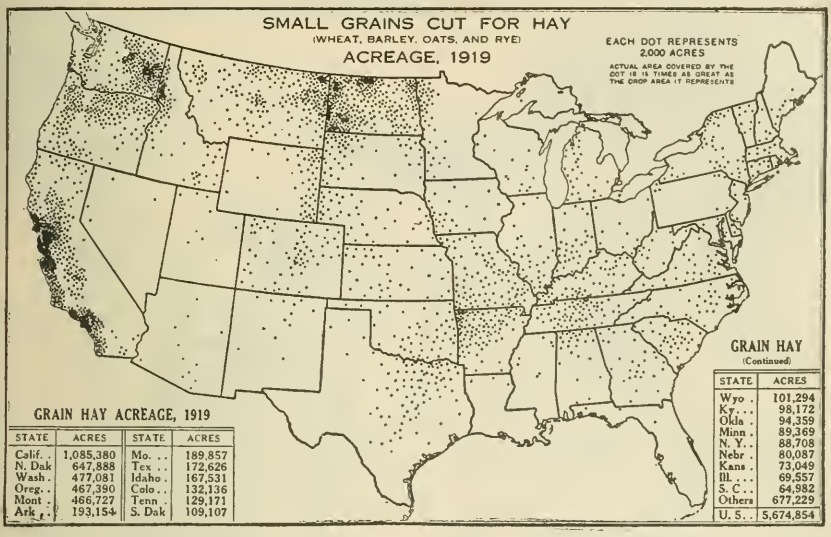
FIG. 43.—This map shows the acreage of clover grown alone (for timothy and clover mixed see Fig. 40). "Clover" may mean red, mammoth, or alsike clover in the Northern and Central States, crimson clover, a very different plant, in the coastal plain of Delaware, Maryland, and Virginia, bur clover in parts of the South, and was specifically stated in the census schedule to include lespedeza. Consequently, the map above, like that of wild hay, includes several different plants, all legumes, however. Most of the clover acreage, it will be noted, is located in the Corn Belt and the Corn and Winter Wheat Region, particularly along the lower Ohio River and up the Mississippi as far as St. Louis. Much of this clover is grown for seed as well as for hay.



STATE	ACRES	STATE	ACRES
N. Y.	595,829	Ky.	260,517
Tenn.	371,995	Ala.	211,210
Ill.	355,360	Minn.	204,631
Mo.	305,596	Miss.	177,955
N. Dak.	264,430	N. H.	161,651
Tex.	261,464	Conn.	151,583

STATE	ACRES
Nebr.	150,034
Mass.	149,597
Ga.	149,129
Ark.	148,023
Vt.	147,731
Mo.	141,061
Okla.	140,278
Kans.	126,483
Colo.	126,041
Other.	1,450,760
U. S.	6,051,357

FIG. 44.—This map shows the geographic distribution of the census item entitled "Other tame or cultivated grasses cut for hay." In New England and New York it consists mostly of redtop, quack grass, orchard grass, and Canada blue grass; the dense center in southern Illinois is largely redtop; in the Black Prairie of Alabama and Mississippi, and in general throughout the South, the dots represent Bermuda and Johnson grass principally; while in eastern Tennessee orchard grass and tall rye grass probably constitute most of the acreage shown. The scattered acreage in the States from North Dakota to Texas is almost wholly millet, Sudan grass, or amber cane.



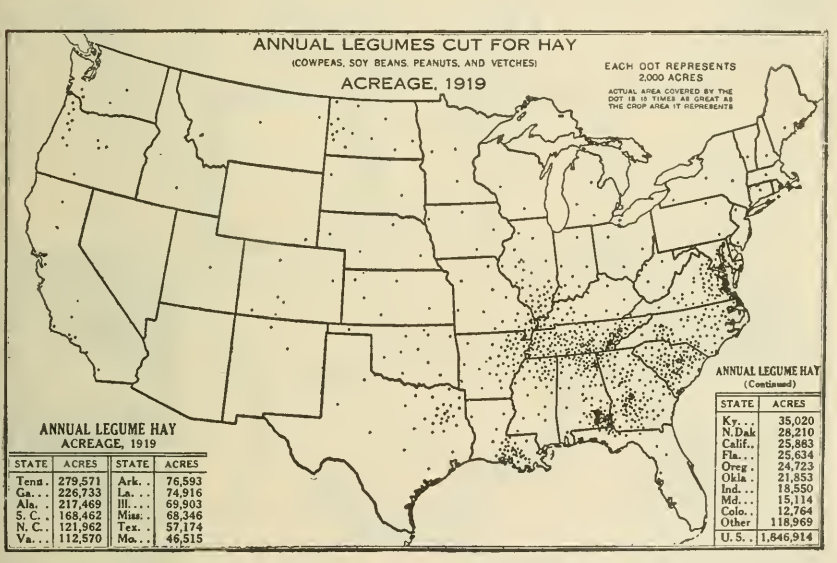
GRAIN HAY ACREAGE, 1919

STATE	ACRES	STATE	ACRES
Calif.	1,085,380	Mo.	189,857
N. Dak	647,888	Tex.	172,626
Wash.	477,081	Idaho	167,531
Oreg.	467,390	Colo.	132,136
Mont.	466,727	Tenn.	129,171
Ark.	193,154	S. Dak	109,107

GRAIN HAY (Continued)

STATE	ACRES
Wyo.	101,294
Ky.	98,172
Okla.	94,359
Minn.	89,369
N. Y.	88,708
Nebr.	80,087
Kans.	73,049
Ill.	69,557
S. C.	64,982
Others	677,229
U. S.	5,674,854

FIG. 45.—The small grains—barley, oats, wheat, and occasionally rye—are cut green for hay, mostly in the Pacific Coast States, where a hay crop is needed which will grow quickly during the cool, moist winters, and which need not survive the long summer drought. In California barley mostly is used, but in Washington and Oregon wheat and oats are more commonly cut for hay. The large acreage shown in North Dakota and eastern Montana is mostly wheat, and is doubtless larger than usual owing to the dry season which caused the crop in much of this area to be scarcely worth threshing.



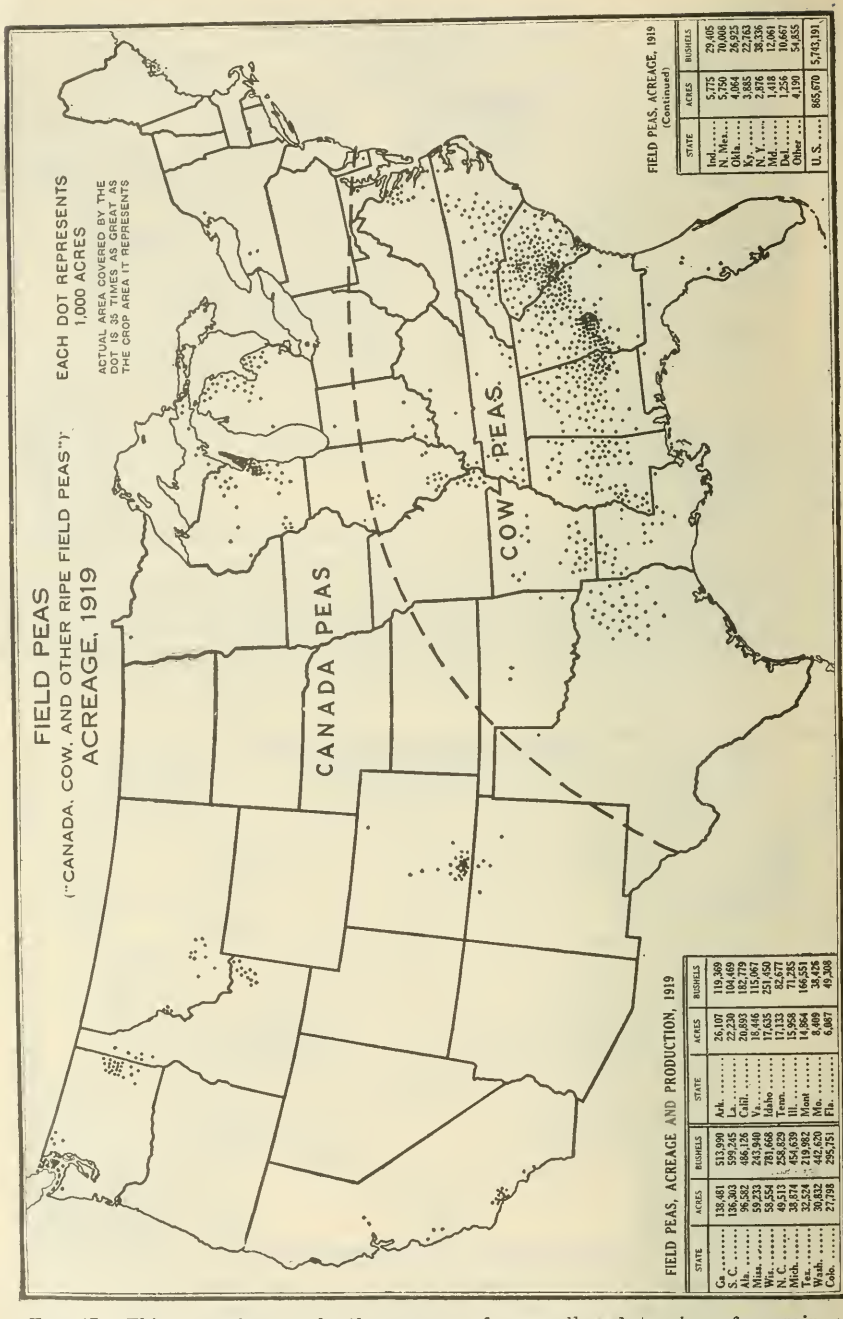
ANNUAL LEGUME HAY ACREAGE, 1919

STATE	ACRES	STATE	ACRES
Tenn.	279,571	Ark.	76,593
Ga.	226,733	La.	74,916
Ala.	217,469	Ill.	69,903
S. C.	168,462	Miss.	68,346
N. C.	121,962	Tex.	57,174
Va.	112,570	Mo.	46,515

ANNUAL LEGUME HAY (Continued)

STATE	ACRES
Ky.	35,020
N. Dak	28,210
Calif.	25,883
Fla.	25,634
Oreg.	24,723
Okla.	21,853
Ind.	18,550
Md.	15,114
Colo.	12,764
Other	118,969
U. S.	1,846,914

FIG. 46.—"Annual legumes cut for hay" was a new item in the 1920 census schedule, which revealed that nearly 2,000,000 acres of cowpeas, soy beans, and peanuts are cut for hay, mostly in the southeastern quarter of the United States. The dense center in southeastern Alabama and the more widely distributed acreage in Tennessee consist principally of cowpeas. The thinly scattered dots in the North and West are mostly soy beans, except in the North Pacific Region, where vetches are frequently grown for hay. Soy beans can be grown in a much cooler climate than cowpeas or peanuts, and are quite drought resistant.



STATE	ACRES	BUSHELS
Ga.	138,481	513,990
S. C.	136,303	599,245
Ala.	96,582	486,126
Miss.	59,233	243,940
Wis.	58,554	781,668
N. C.	49,513	258,829
Mich.	38,824	715,523
Tex.	32,214	259,982
Wash.	30,832	442,620
Colo.	27,798	295,751
Ark.	26,107	119,369
La.	22,230	104,469
Calif.	20,893	182,779
Va.	18,446	115,067
Idaho	17,635	251,450
Tenn.	17,333	85,777
Ill.	15,583	71,295
Mont.	14,864	166,551
Me.	8,409	38,425
Fla.	6,087	49,308

STATE	ACRES	BUSHELS
Ind.	5,775	29,405
Oh.	5,570	70,038
N. Mex.	4,064	26,925
Ky.	3,885	22,763
N. Y.	2,876	38,336
Md.	1,418	12,061
Del.	1,256	10,667
Other	4,190	54,855
U. S.	865,670	5,743,191

FIG. 47.—This map shows only the acreage of peas allowed to ripen for grain or seed. The acreage of green garden peas, even when grown in the field for canning, is shown in Figure 56. Peas cut for hay or forage are included in "Annual Legumes," Figure 46. Cowpeas, which are more like a bean than a pea, are of importance as a seed crop only on the Piedmont and Upper Coastal Plain of the South, extending as far north as Maryland and central Illinois. Canada peas, which thrive only in a cool climate, are grown mostly in Wisconsin, especially on the heavy soils of the Door Peninsula, in northeastern Michigan, and in the higher or cooler districts of the Rocky Mountain Region.

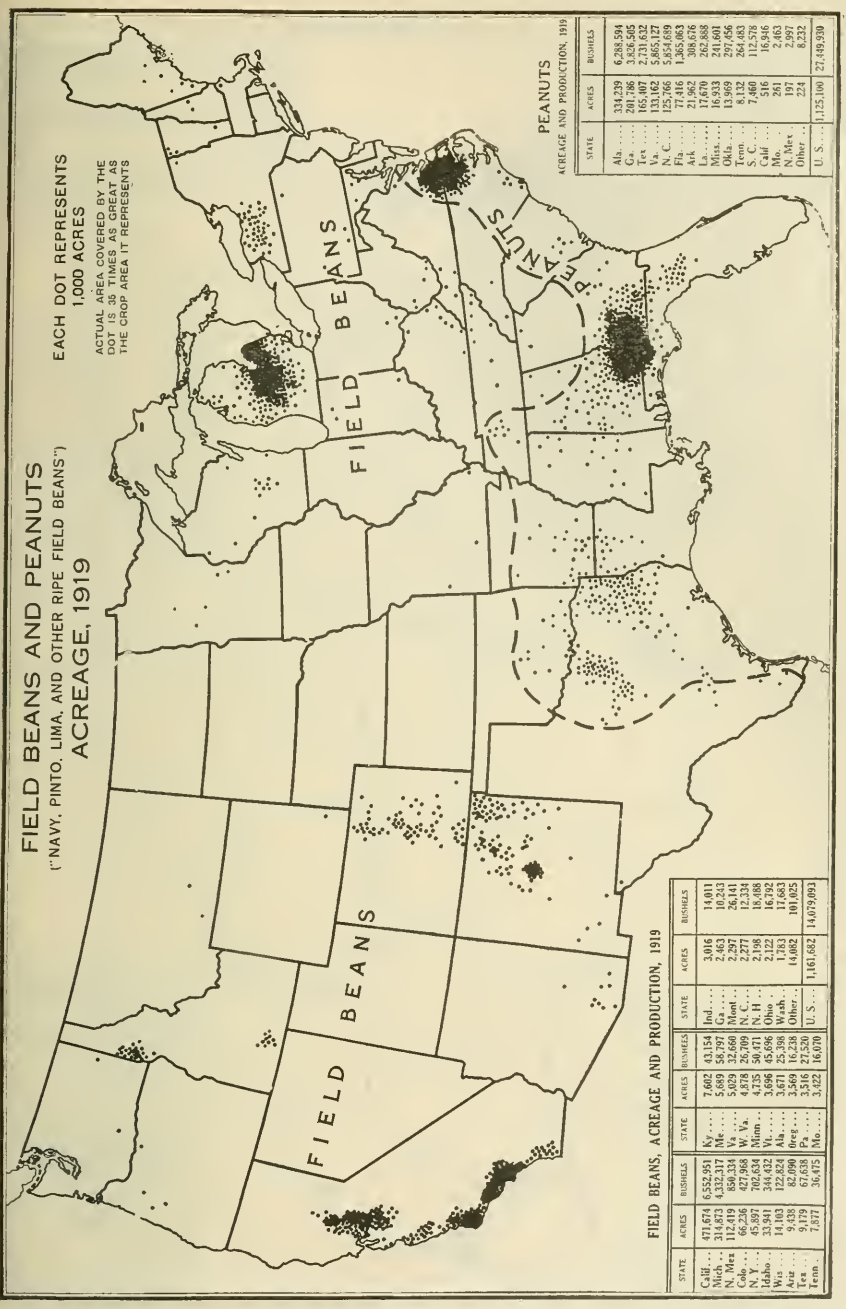
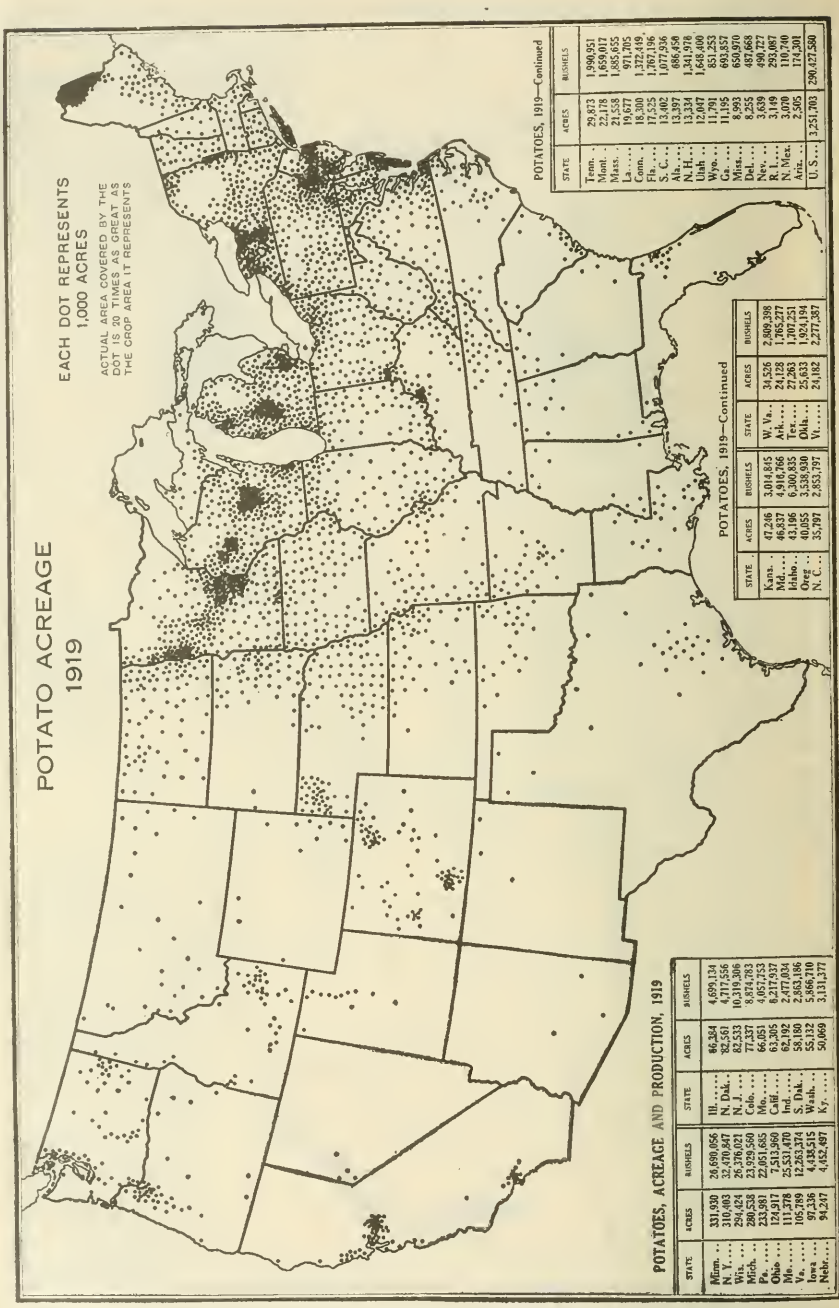


FIG. 48.—Field beans are produced principally in five areas—in western New York and central Michigan, where the leading varieties are white pea, white medium, and red kidney; on the high plains of New Mexico and eastern Colorado, where the native Mexican or pinto bean mostly is grown; in California, where practically the entire commercial crop of limas and nearly half of the crop of white beans is raised; and in Idaho, where both the white and Mexican, also various other varieties, are grown and shipped to all parts of the United States to use as seed.

The acreage of peanuts shown on the map does not include the crop "hogged off" by stock. The peanuts for human consumption are grown mostly in the North Carolina-Virginia district; those grown in Georgia and Alabama are largely fed to hogs or made into peanut butter.



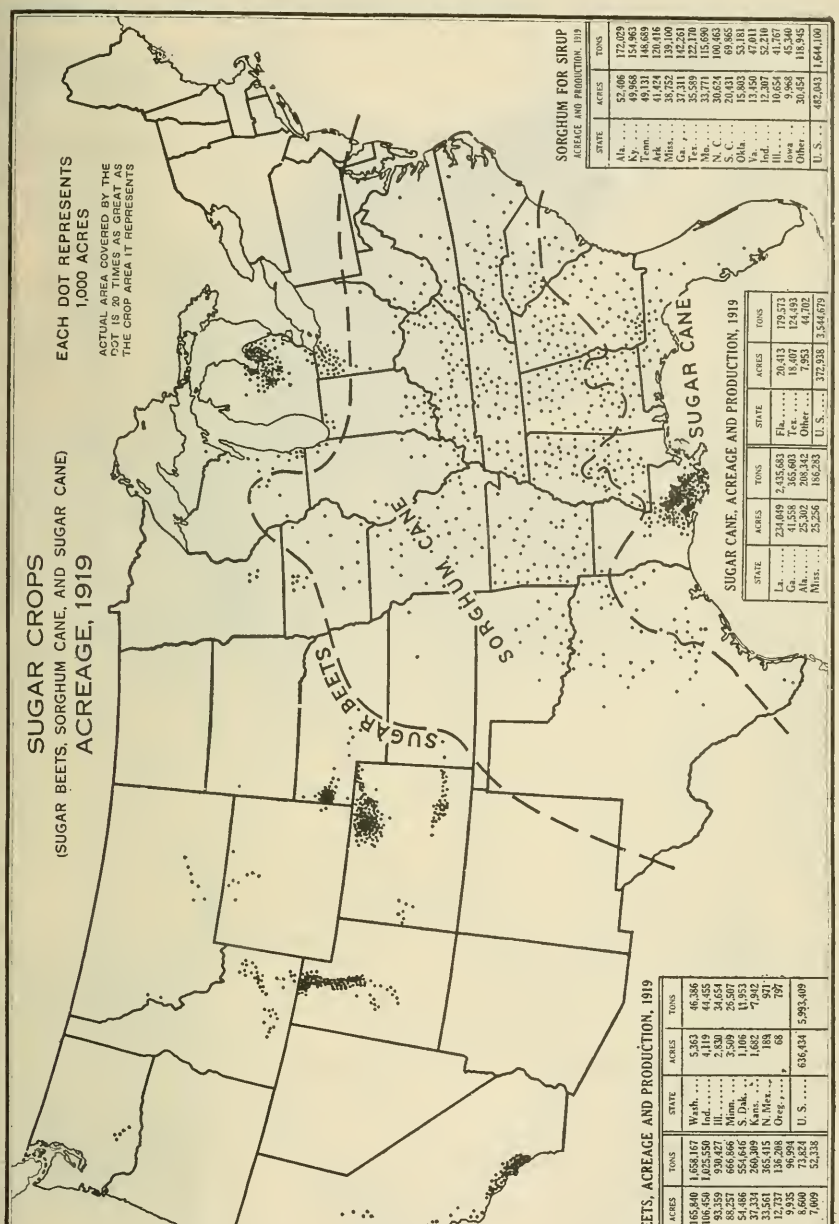
STATE	ACRES	BUSHELS	STATE	ACRES	BUSHELS	STATE	ACRES	BUSHELS
Minn.	331,930	26,690,056	Ill.	86,384	4,699,134			
N. Y.	310,403	32,470,847	N. Dak.	82,561	4,717,556			
Wis.	294,424	26,376,021	N. J.	82,533	10,319,306			
Mich.	280,538	23,929,560	Colo.	77,337	8,814,783			
Pa.	233,961	22,051,665	Ohio	66,301	4,277,553			
Ore.	111,371	8,511,470	Calif.	64,268	8,017,837			
Me.	111,371	25,531,470	Ind.	62,192	2,477,034			
Va.	105,789	12,263,374	S. Dak.	58,180	2,883,186			
Iowa	97,336	4,438,515	Wash.	55,132	5,886,710			
Nebr.	94,247	4,452,497	Ky.	50,060	3,131,377			

STATE	ACRES	BUSHELS
Tenn.	29,823	1,990,951
Mont.	22,178	1,659,017
Mass.	21,558	1,885,655
La.	19,677	971,705
Conn.	18,300	1,372,449
Fla.	17,525	1,067,196
S. C.	13,402	1,016,756
Md.	13,339	1,068,578
N. H.	13,334	1,341,978
Utah	12,047	1,648,400
Wyo.	11,791	851,253
Ga.	11,195	693,852
Miss.	8,993	650,950
Del.	8,255	497,868
Nev.	3,149	293,087
R. I.	3,119	293,087
N. Mex.	3,070	110,740
Ariz.	2,505	174,301
U. S.	1,251,703	290,427,580

STATE	ACRES	BUSHELS
Kans.	47,246	3,014,815
Md.	46,837	4,916,766
Idaho	43,196	6,300,835
Oreg.	40,055	3,538,500
N. C.	35,791	2,953,791

STATE	ACRES	BUSHELS
W. Va.	34,526	2,909,398
Ark.	24,128	1,765,277
Tex.	27,283	1,007,251
Okla.	25,853	1,923,194
Vt.	24,102	2,277,597

FIG. 49.—The regions of heaviest potato production lie to the north of the Corn Belt. This is due partly to the fact that the quality and yield of potatoes are better in regions of cool climate, and partly to the fact that corn, which requires labor at the same time, is very productive and gives a greater return. Many of the large centers of potato production are in regions of sandy or loamy soils—Aroostook County (Me.), Long Island, New Jersey, eastern Virginia, western Michigan, central Wisconsin, and Anoka County (Minn.). Many of the minor centers of production are located near large cities, since potatoes are a bulky crop, expensive to transport, and can be sold at a profit by local gardeners and farmers in competition with the crop from the large production centers.



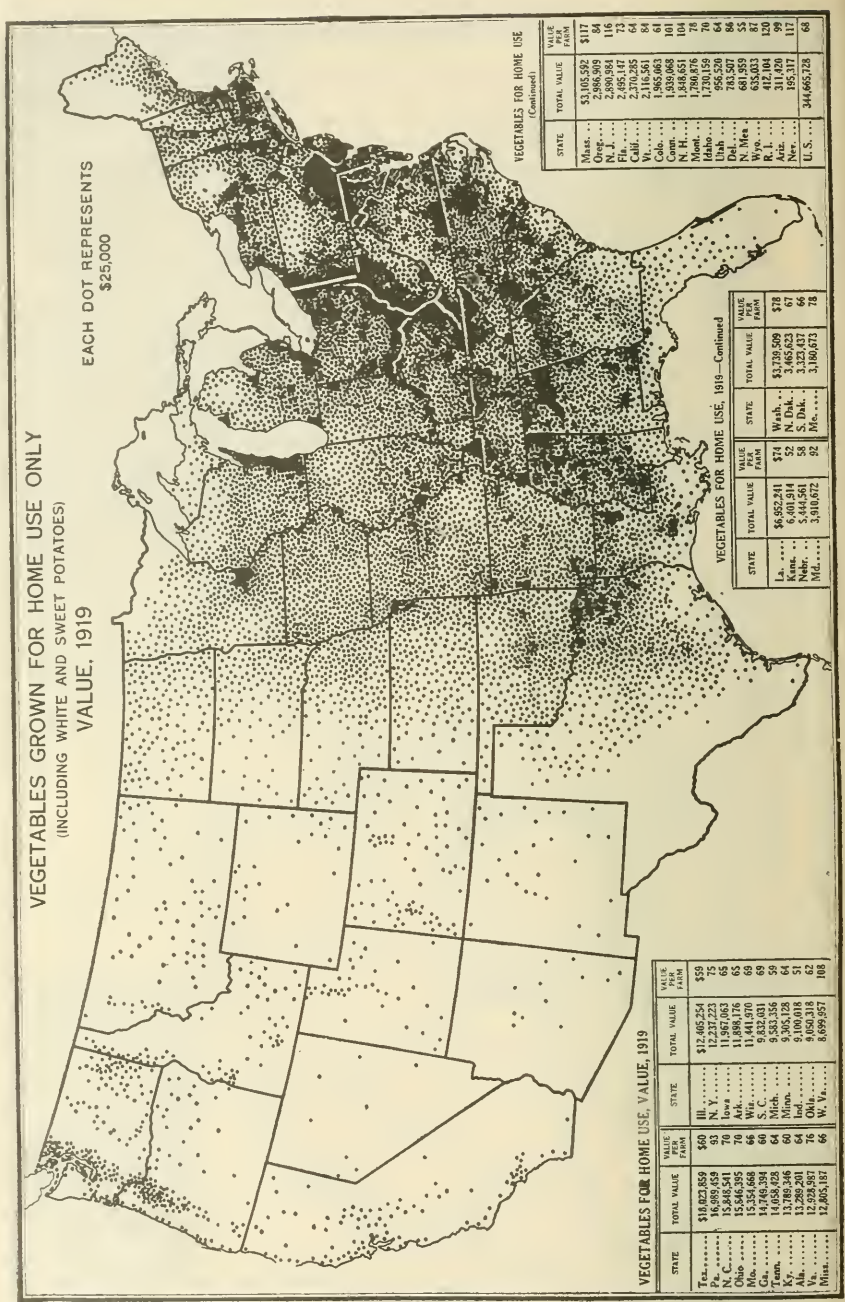
STATE	ACRES	TONS	STATE	ACRES	TONS
Colo.	165,840	1,658,167	Wash.	5,363	46,386
Mich.	106,458	1,025,550	Ind.	4,119	44,455
Utah	93,359	930,427	Ill.	2,830	34,654
Calif.	88,251	666,666	Minn.	3,509	26,507
Nebr.	54,486	554,646	S. Dak.	1,106	11,933
Idaho	37,171	368,961	Kans.	1,627	7,941
Ohio	33,561	365,415	N. Mex.	184	971
Wis.	12,737	136,208	Oreg.	68	797
Wyo.	9,935	96,994	U. S.	636,434	5,993,409
Mont.	8,660	73,624			
Iowa	7,009	52,338			

STATE	ACRES	TONS
Ala.	52,406	172,029
Ky.	49,968	154,963
Tenn.	49,131	146,689
Miss.	43,414	120,415
Mich.	38,752	139,100
Ga.	37,311	142,261
Tex.	35,559	122,170
Mo.	33,771	115,690
N. C.	30,624	100,463
S. C.	20,431	69,865
Okla.	15,630	53,311
Va.	13,950	47,011
Ind.	12,307	52,210
Ill.	10,654	41,767
Iowa	9,968	45,340
Other	30,454	118,945
U. S.	482,043	1,644,100

STATE	ACRES	TONS
La.	234,049	2,435,683
Ga.	41,558	365,603
Ala.	25,302	208,342
Miss.	25,256	186,233

STATE	ACRES	TONS
Fla.	20,413	179,573
Tex.	18,407	124,493
Other	7,953	44,702
U. S.	372,938	3,544,679

Fig. 50.—The two more important commercial sugar crops are cane and beet. The acreage of sorghum cane is greater than that of sugar cane, but the sirup is mostly made from the sorghum on the farm and does not enter into commerce. Sugar beets do not, in general, show a sufficiently high sugar content to be manufactured profitably where the summer temperature is over 72°, and the beets must also then compete with corn for the farmer's labor. Sugar cane is not grown commercially for sugar outside of the almost frost-free lower Mississippi Delta of Louisiana. The broad belt between the sugar-beet and sugar-cane areas is occupied by a thin and scattered acreage of sorghum cane.

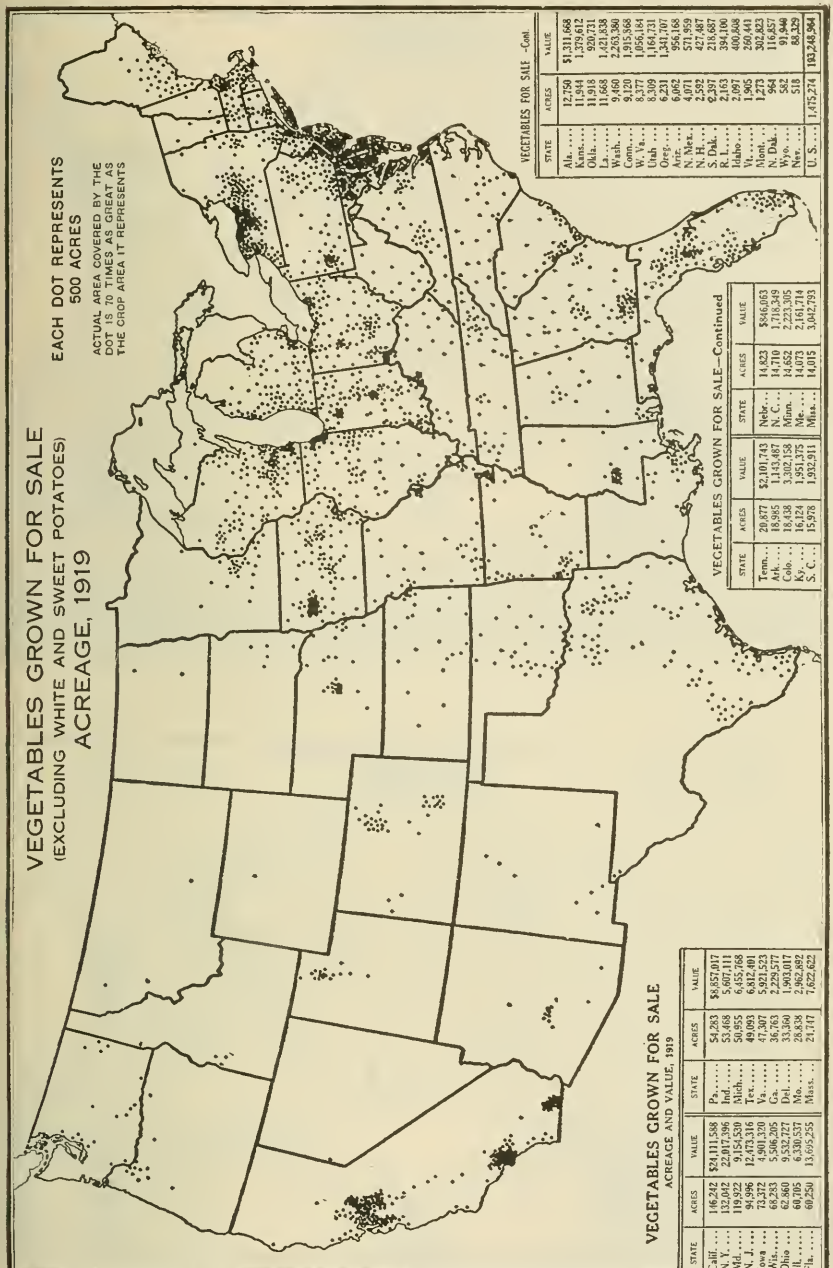


STATE	TOTAL VALUE	VALUE PER FARM
Tex.	$18,823,859	$60
Pa.	16,893,549	63
N. C.	15,848,541	70
Ohio	15,846,395	70
Mo.	15,354,668	66
Ga.	14,749,394	60
Tenn.	14,058,428	64
Ky.	13,789,346	60
Ala.	13,298,291	64
Ark.	12,852,587	74
Miss.	12,805,187	66
Ill.	$12,465,254	$59
N. Y.	12,233,221	75
Iowa	11,967,063	65
Ark.	11,898,176	65
Wis.	11,441,970	69
S. C.	9,832,031	69
Mich.	9,583,356	59
Minn.	9,305,128	64
Ind.	9,100,048	57
Okl.	9,050,318	62
W. Va.	8,699,957	108

STATE	TOTAL VALUE	VALUE PER FARM
La.	$6,952,241	$74
Kans.	6,401,914	52
Nebr.	5,444,561	58
Md.	3,910,672	92
Wash.	$3,739,509	$78
N. Dak.	3,465,623	67
S. Dak.	3,323,437	66
Me.	3,186,873	78

STATE	TOTAL VALUE	VALUE PER FARM
Mass.	$3,105,592	$117
Oreg.	2,986,909	84
N. J.	2,890,984	116
Fla.	2,495,147	73
Calif.	2,370,285	64
Vt.	2,146,561	64
Conn.	1,955,468	63
Colo.	1,839,068	101
N. H.	1,848,651	104
Mont.	1,780,876	78
Idaho	1,730,159	70
Utah	956,520	64
Del.	783,507	94
N. Mex.	681,353	57
Wyo.	634,693	87
R. I.	412,104	120
Ariz.	311,420	99
Nev.	195,317	117
U. S.	344,665,728	68

FIG. 51.—The census of 1920 was the first to separate vegetables grown for home use from those grown for sale. The areas of densest production of vegetables for home use are southeastern Pennsylvania, the upper Ohio Valley, the mountainous districts of eastern Kentucky and Tennessee and of northern Alabama, the upper Piedmont of the Carolinas and Georgia, and much of Mississippi, also the Lake Michigan shore counties of Wisconsin, southeastern Michigan, and central New York—areas of small farms owned by frugal people (see Figs. 98 and 99). The average size of the farm garden, however, is apparently, greatest in Virginia and Massachusetts, about one-half acre, and smallest in the prairie and plains States, about one-fifth acre.

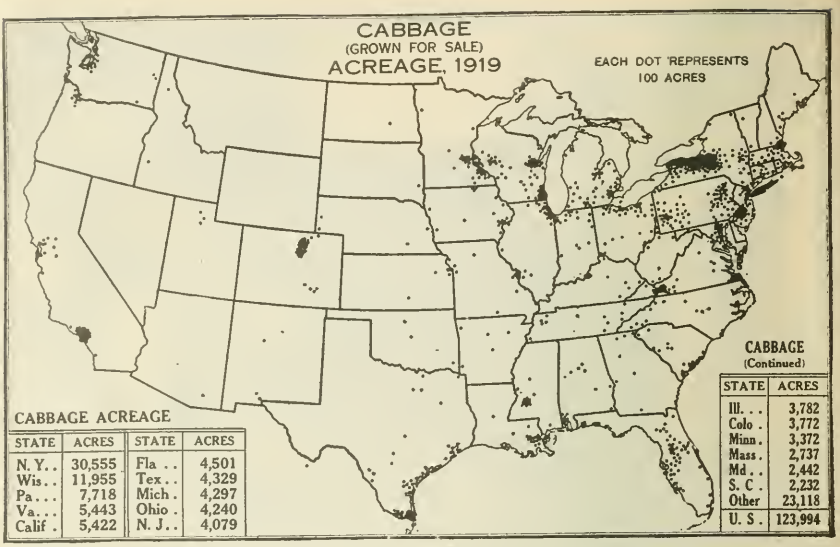


STATE	ACRES	VALUE
Calif.	146,242	$24,111,588
N.Y.	132,042	22,017,396
Mass.	113,552	19,155,530
N. J.	94,996	12,473,316
Iowa	73,372	4,901,320
Wis.	68,283	5,506,205
Ohio	62,960	9,532,727
Ill.	60,705	6,330,537
Fla.	60,250	13,695,255
Pa.	54,283	$8,857,017
Ind.	53,468	5,607,111
Mich.	51,535	6,435,768
Tex.	49,093	6,841,400
Va.	47,307	5,921,523
Ga.	36,763	2,229,577
Del.	33,360	1,903,017
Mo.	28,838	2,962,882
Mass.	21,147	7,822,622

STATE	ACRES	VALUE
Tenn.	20,877	$2,101,743
Ark.	18,985	1,143,487
Colo.	18,438	3,302,158
Ky.	16,124	1,951,375
S. C.	15,978	1,932,911
Nebr.	14,823	$846,063
N. C.	14,710	1,718,349
Minn.	14,652	2,223,305
Me.	14,073	2,161,714
Miss.	14,015	3,042,793

STATE	ACRES	VALUE
Ala.	12,750	$1,311,668
Kans.	11,944	1,379,612
Okla.	11,918	920,731
La.	11,668	1,421,838
Wash.	9,460	2,265,380
Conn.	9,120	1,915,588
R. I.	8,377	1,965,514
Utah	8,309	1,164,731
Oreg.	6,231	1,341,707
Ariz.	6,062	956,168
N. Mex.	4,071	571,959
N. H.	2,592	427,487
S. Dak.	2,397	216,687
Md.	2,153	1,394,100
R. I.	2,097	409,600
Idaho	1,965	260,441
Vt.	1,273	302,823
Mont.	964	116,657
N. Dak.	582	91,940
Wyo.	518	84,329
Nev.		
U. S.	1,475,274	$193,240,904

FIG. 52.—The most important area of vegetable production extends from New York City to Norfolk, Va. In this area about one-fifth of the Nation's commercial crop is produced. A second important area extends from Utica, N. Y., west to Buffalo and Erie. Another belt surrounds the southern half of Lake Michigan. Florida and southern Georgia, where perhaps one-third of the winter vegetables are grown, may be said to constitute a fourth area. California possesses three important areas—the Sacramento-Stockton district, the Los Angeles district, and the Imperial Valley. In California also the winter crop is important. Smaller centers of production adjoin most of the large cities. The centers shown in western Iowa and Nebraska represent pop corn.



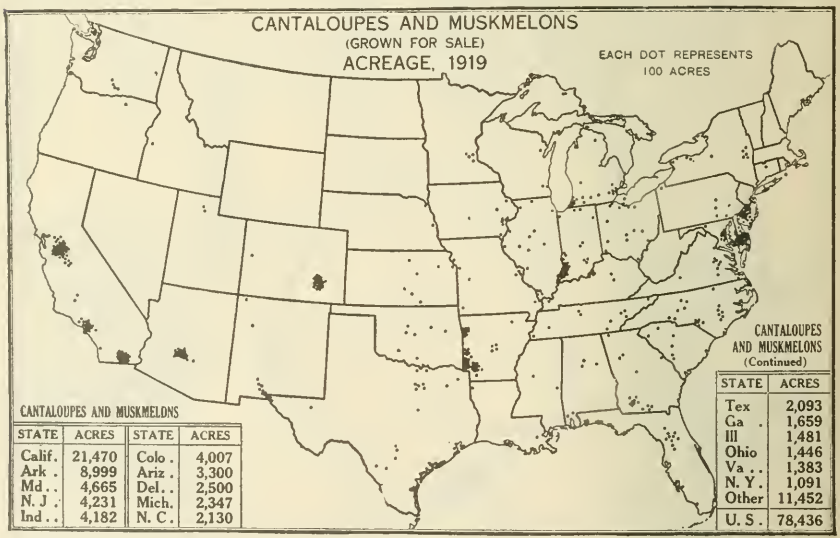
CABBAGE ACREAGE

STATE	ACRES	STATE	ACRES
N. Y..	30,555	Fla ..	4,501
Wis..	11,955	Tex..	4,329
Pa...	7,718	Mich.	4,297
Va...	5,443	Ohio .	4,240
Calif .	5,422	N. J..	4,079

CABBAGE
(Continued)

STATE	ACRES
Ill. ..	3,782
Colo .	3,772
Minn .	3,372
Mass .	2,737
Md ..	2,442
S. C .	2,232
Other	23,118
U. S .	123,994

FIG. 53.—The principal cabbage-producing districts are in the North, the largest being the belt of counties in New York from Buffalo to Syracuse. In this district nearly one-quarter of the Nation's acreage is found, mostly on the muck lands and the Clyde series of soils. Other important districts are Long Island, N. Y.; Burlington and Gloucester Counties, N. J.; around Norfolk and in Wythe County, Va.; along Lake Michigan from Chicago to Milwaukee; in Green Bay County, Wis.; around Denver, Colo., and Los Angeles, Calif. Early cabbages are raised mostly in Florida, in the Young's Island (S. C.) district, in Copiah County, Miss., and in southern Texas.



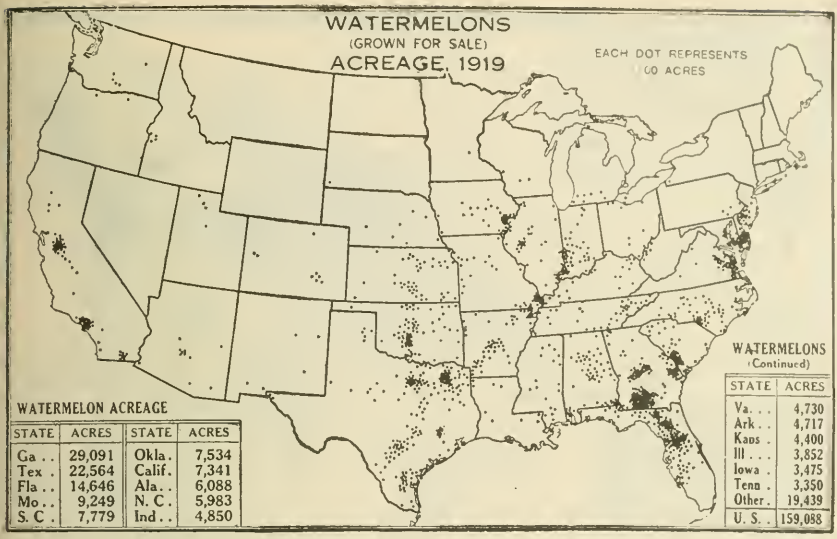
CANTALOUPES AND MUSKMELONS

STATE	ACRES	STATE	ACRES
Calif.	21,470	Colo .	4,007
Ark .	8,999	Ariz .	3,300
Md..	4,665	Del..	2,500
N. J .	4,231	Mich.	2,347
Ind..	4,182	N. C.	2,130

CANTALOUPES AND MUSKMELONS
(Continued)

STATE	ACRES
Tex	2,093
Ga .	1,659
Ill	1,481
Ohio	1,446
Va ..	1,383
N. Y.	1,091
Other	11,452
U. S .	78,436

FIG. 54.—The principal cantaloupe-producing districts are now located in the West, California having over one-quarter of the Nation's acreage. The most important western districts are in Stanislaus (Turloc district), Los Angeles, and Imperial Counties, Calif.; in the Salt River Valley (Phoenix district) of Arizona; and the Arkansas Valley (Rocky Ford-Ordway district) of Colorado. In these five districts nearly 40 per cent of the Nation's acreage was found in 1919. Arkansas ranked next to California in acreage, the principal districts being located in Hempstead and Sevier Counties. Other important districts are Gibson and Knox Counties in Indiana, Sussex in Delaware, Gloucester in New Jersey, and Mitchell County (Pelham district), Ga.



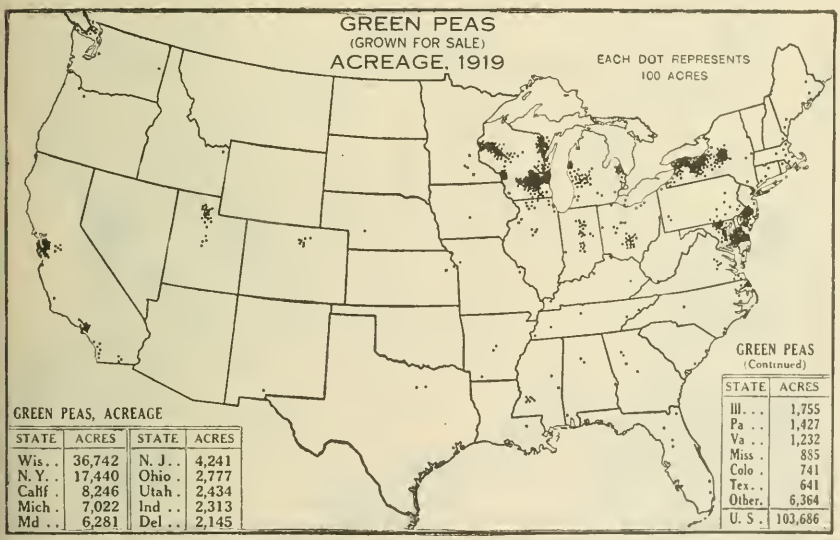
WATERMELON ACREAGE

STATE	ACRES	STATE	ACRES
Ga . .	29,091	Okla.	7,534
Tex .	22,564	Calif.	7,341
Fla . .	14,646	Ala. .	6,088
Mo . .	9,249	N. C.	5,983
S. C .	7,779	Ind . .	4,850

WATERMELONS
(Continued)

STATE	ACRES
Va. . .	4,730
Ark . .	4,717
Kans .	4,400
Ill . . .	3,852
Iowa .	3,475
Tenn .	3,350
Other .	19,439
U. S. .	159,088

FIG. 55.—The principal watermelon-producing districts are in the South, Georgia and Texas having nearly one-third of the Nation's acreage. The most important districts in Georgia center around Valdosta and Thomasville, and in Texas around Sulphur Springs. Florida ranks next in importance, but the acreage is more scattered. There is an important center in Barnwall and Hampton Counties, S. C., in Scotland County, N. C., and a less dense acreage along both shores of Chesapeake Bay in Virginia and Maryland. Dunklin and Scott Counties in southeastern Missouri are other important districts, also Grady County, Okla., and Stanislaus and Los Angeles Counties, Calif.



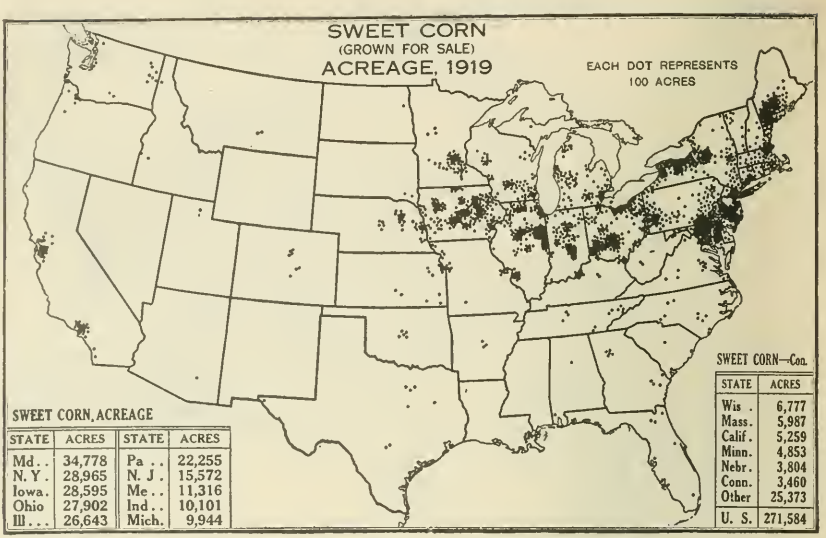
GREEN PEAS, ACREAGE

STATE	ACRES	STATE	ACRES
Wis. .	36,742	N. J. .	4,241
N. Y. .	17,440	Ohio .	2,777
Calif .	8,246	Utah .	2,434
Mich .	7,022	Ind . .	2,313
Md . .	6,281	Del . .	2,145

GREEN PEAS
(Continued)

STATE	ACRES
Ill. . .	1,755
Pa . .	1,427
Va . .	1,232
Miss .	885
Colo .	741
Tex . .	641
Other.	6,364
U. S .	103,686

FIG. 56.—Green peas, like cabbages, are a cool-climate crop, but in pea production Wisconsin is more important than New York, having, indeed, one-third of the Nation's acreage. The Wisconsin districts include Columbia, Dodge, Green Lake, Sheboygan, and Washington Counties in the southeast, Barron and Chippewa Counties in the northwest, and Marinette and Oconto in the northeast. The New York district, which ranks next in importance, extends from Buffalo to Utica. Eastern Maryland and Delaware rank third in importance, followed by California (San Francisco Bay district) and Michigan. A small acreage is found in southern New Jersey, and in the Salt Lake district and Jordan Valley of Utah.



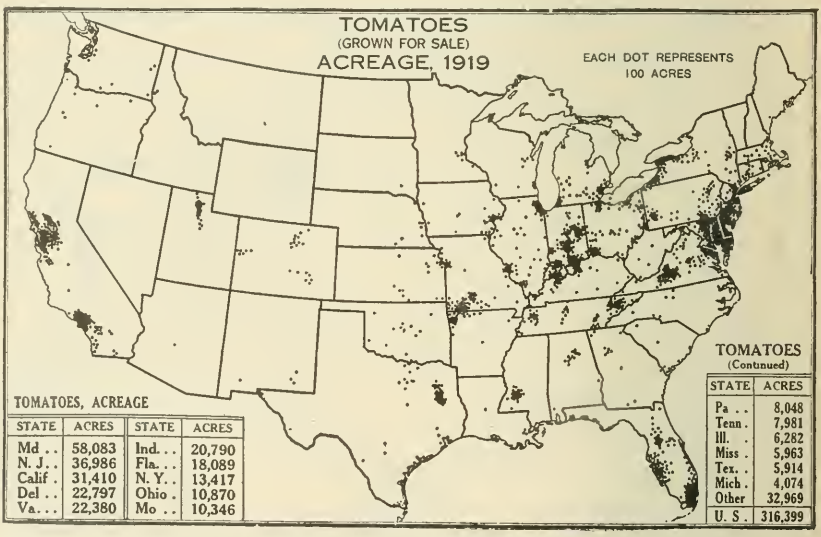
SWEET CORN, ACREAGE

STATE	ACRES	STATE	ACRES
Md..	34,778	Pa ..	22,255
N. Y.	28,965	N. J.	15,572
Iowa.	28,595	Me..	11,316
Ohio	27,902	Ind..	10,101
Ill...	26,643	Mich.	9,944

SWEET CORN—Con.

STATE	ACRES
Wis .	6,777
Mass.	5,987
Calif.	5,259
Minn.	4,853
Nebr.	3,804
Conn.	3,460
Other	25,373
U. S.	271,584

FIG. 57.—Sweet corn is primarily an eastern, middle-latitude crop, but it is extensively grown also in New York and New England, owing in large measure to the excellent quality produced, and the fact that it need not mature. Maryland ranks first in acreage, followed by New York, Iowa, Ohio, Illinois, and Pennsylvania in close succession. New Jersey, relative to its area, has a large acreage. The acreage in these States is concentrated in a few counties, as can be seen on the map. It is interesting to note that although there is almost no corn grown for grain in Maine or California (see Fig. 24), there is a considerable acreage of sweet corn in these States.



TOMATOES, ACREAGE

STATE	ACRES	STATE	ACRES
Md ..	58,083	Ind...	20,790
N. J..	36,986	Fla...	18,089
Calif .	31,410	N. Y..	13,417
Del ..	22,797	Ohio .	10,870
Va...	22,380	Mo ..	10,346

TOMATOES
(Continued)

STATE	ACRES
Pa ..	8,048
Tenn .	7,981
Ill. .	6,282
Miss .	5,963
Tex. .	5,914
Mich .	4,074
Other	32,969
U. S .	316,399

FIG. 58.—Tomatoes are grown for sale in almost all parts of the United States, except in the Spring Wheat, Northern Great Plains and Arid Intermountain Plateau regions. The eastern Maryland, Delaware, and southern New Jersey districts include over one-third of the Nation's acreage, and the Los Angeles and San Francisco Bay districts in California about one-tenth. Virginia and Indiana rank next in importance, followed by Florida, which produces most of the winter crop. Other important early-tomato districts are located in Copiah County, Miss., and Cherokee County, Tex. Tomatoes lead all the vegetables grown for sale in the United States (other than potatoes and sweet potatoes), both in acreage and value.

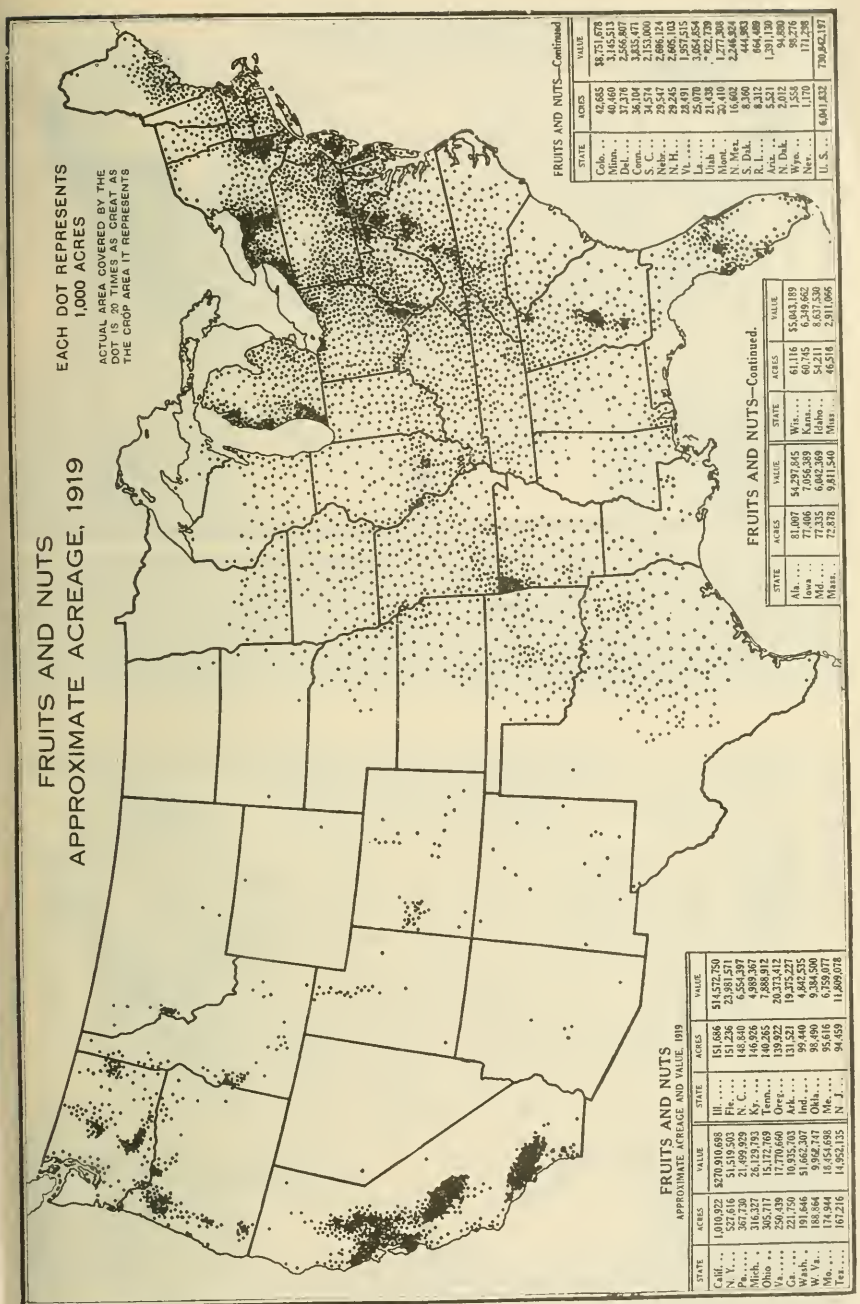


Fig. 59.—California contributed over one-sixth of the Nation's acreage of fruits and nuts in 1919 and over one-third of the value. The district in southern California consists mostly of citrus fruits, walnuts, and apricots (see figs. 68 and 69); the central (San Joaquin Valley) district, of raisin grapes, peaches, and apricots, with some citrus fruits in the eastern foothills (Figs. 64, 65, 67, and 68); and the northern districts of peaches and apricots, plums and prunes, grapes, walnuts, and almonds, with apples near the cool coast, and pears in the foothills. The dots in Florida represent mostly citrus fruits, those in the cotton belt, especially Georgia and Texas, peaches mostly, and pecans; elsewhere in the United States, with few exceptions, the apple is the dominant fruit (Figs. 60, 61, 62, and 63).

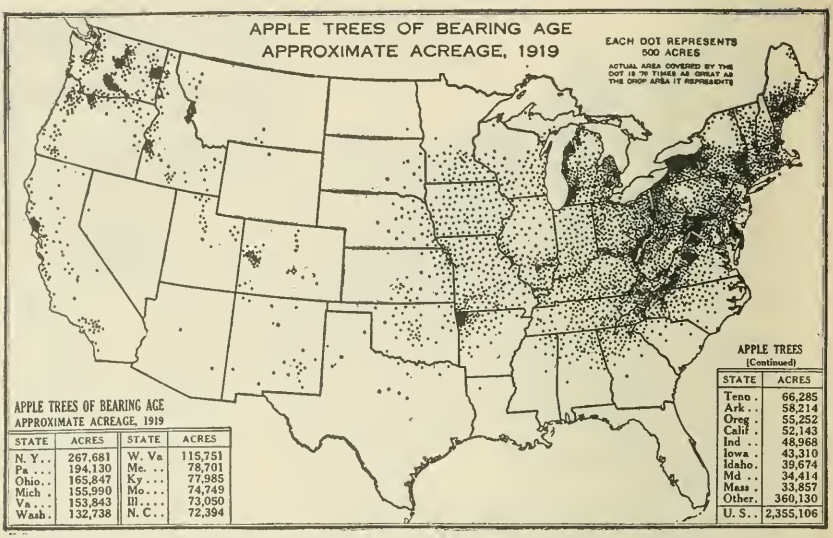


FIG. 60.—About 15 per cent of the acreage of apple trees of bearing age was in the West in 1920, and nearly half of this western acreage was in the State of Washington. New York, Pennsylvania, Ohio, Michigan, and Virginia, however, exceeded Washington in acreage. Most of the apple acreage of the Nation is found in the Hay and Pasture Region from Maine to West Virginia and Michigan, where the climate is cool, but owing either to lake or mountain protection, the winters are moister and less severe than in the interior of the continent. The southern limit of the apple area extends only a little beyond the northern limit of cotton, and the western, or moisture limit, is about that of timothy (see Figs. 22 and 39).

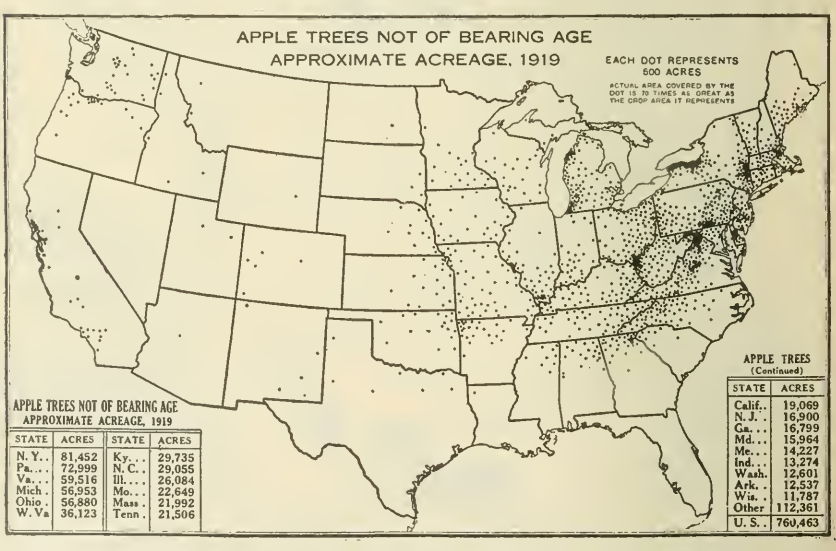
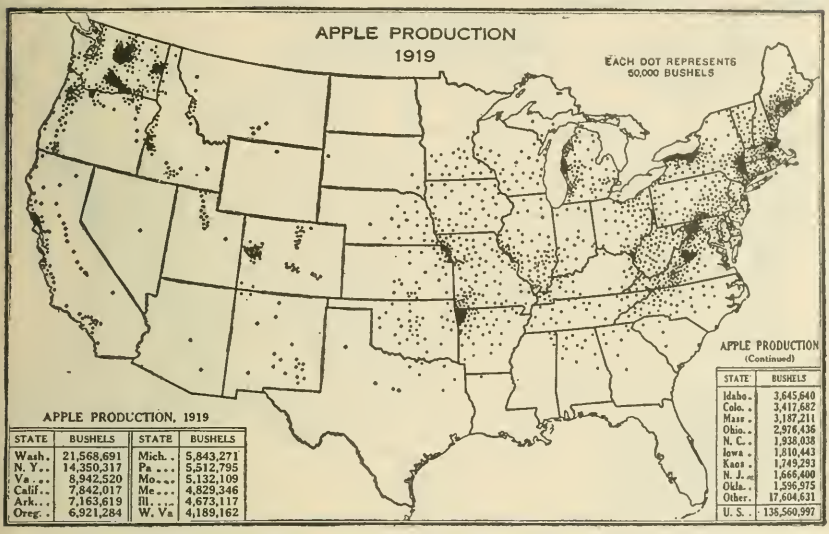


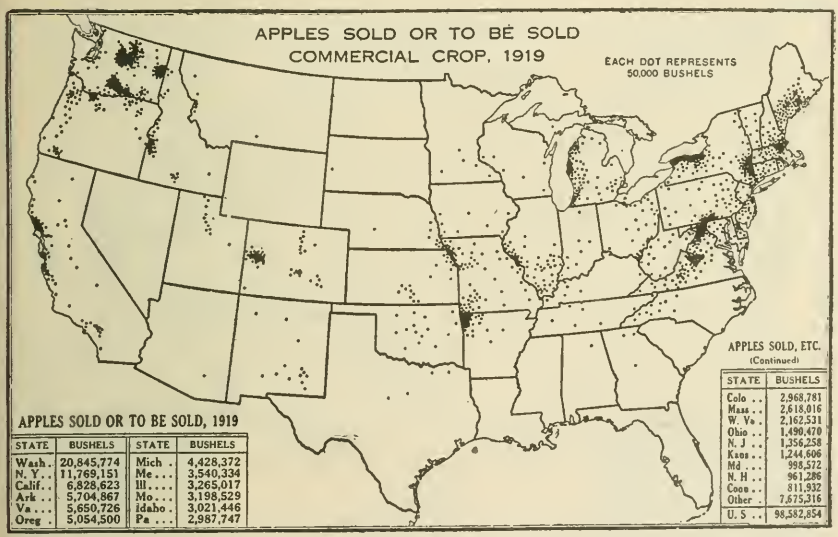
FIG. 61.—There has been very little planting of apple orchards in the West in recent years, the higher freight rates increasing the difficulties of competition with eastern-grown fruit. Less than 9 per cent of the apple trees not of bearing age were in the West in 1920. Most of the acreage of young trees, it will be noted on the map, is located along the shore of Lake Ontario in New York, in the lower Hudson Valley, in New England, along the Appalachians from Pennsylvania to Georgia, in the upper Ohio Valley, along the Lake Michigan shore of Michigan, and in the Sonoma Valley of California. Trees not of bearing age numbered 36 million in 1920 as compared with nearly 66 million in 1910.



STATE	BUSHELS	STATE	BUSHELS
Wash.	21,568,691	Mich.	5,843,271
N. Y.	14,350,317	Pa.	5,512,795
Va.	8,942,520	Mo.	5,132,109
Calif.	7,842,017	Me.	4,829,346
Ark.	7,163,619	Ill.	4,673,117
Oreg.	6,921,284	W. Va.	4,189,162

STATE	BUSHELS
Idaho.	3,645,640
Colo.	3,417,682
Mass.	3,187,211
Ohio.	2,976,436
N. C.	1,938,038
Iowa.	1,810,443
Kans.	1,749,293
N. J.	1,666,400
Okla.	1,596,975
Other.	17,604,631
U. S.	136,560,997

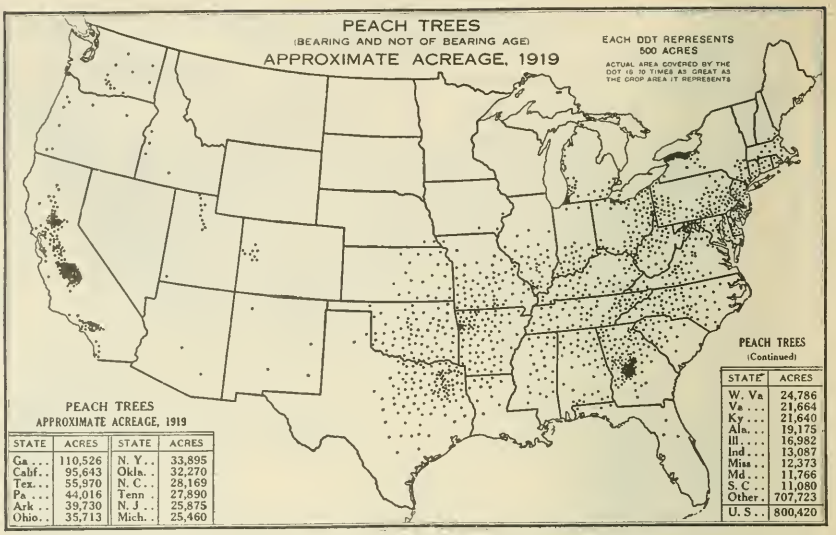
FIG. 62.—The West produced one-third of the apples grown in 1919 despite the fact that it possessed only one-seventh of the acreage of bearing trees. Washington led all States in production, with a total almost equal to that of New York and Virginia combined. The three famous apple districts of Washington—the Yakima Valley, the Wenatchee Valley, and Spokane County—stand out clearly on the map; also the Hood River and Willamette Valleys of Oregon, the Boise, Idaho, district, the Sonoma Valley in California, and the Grand Junction-Delta-Montrose district of Colorado. In the East, the New England area, the two noted New York districts, the Appalachian, the western Michigan, the Ozark, and the northwestern Missouri districts are the most important.



STATE	BUSHELS	STATE	BUSHELS
Wash.	20,845,774	Mich.	4,428,372
N. Y.	11,769,151	Me.	3,540,334
Calif.	6,828,623	Ill.	3,265,017
Ark.	5,704,867	Mo.	3,198,529
Va.	5,650,726	Idaho.	3,021,446
Oreg.	5,054,500	Pa.	2,987,747

STATE	BUSHELS
Colo.	2,968,781
Mass.	2,618,016
W. Va.	2,162,531
Ohio.	1,490,470
N. J.	1,356,258
Kans.	1,244,606
Md.	998,572
N. H.	961,286
Conn.	811,932
Other.	7,675,316
U. S.	98,582,854

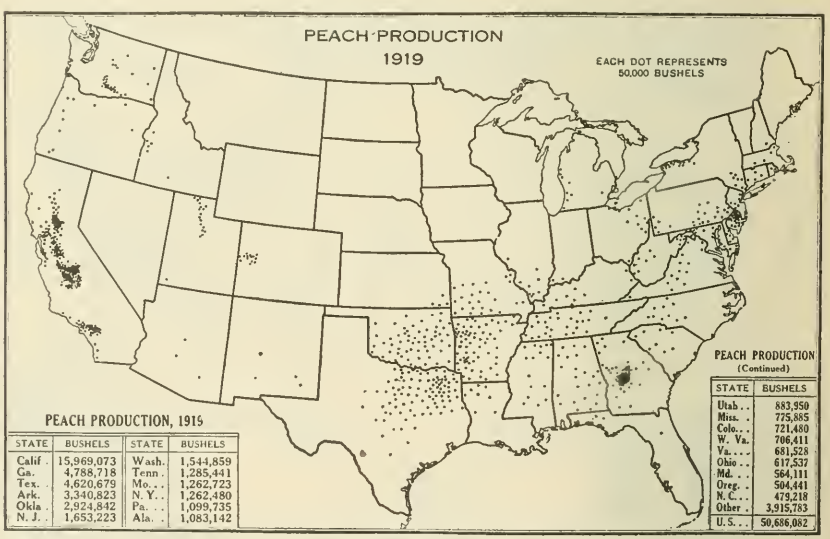
FIG. 63.—The commercial crop of apples in 1919—that is, the quantity "sold or to be sold"—was nearly 100 million bushels, according to the census, constituting three-fourths of the total crop. The West produced over two-fifths of this commercial crop, Washington alone reporting over one-fifth of the total quantity in the United States. Eighty per cent of the commercial crop was produced in the 15 apple districts already referred to. It will be noted that the production of the commercial crop of apples is more concentrated than the total production, and the total production in turn, more concentrated than the acreage. Diseases and pests diminish the production of the unsprayed home orchards several years before they kill the trees.



STATE	ACRES	STATE	ACRES
Ga . . .	110,526	N. Y. .	33,895
Calif. .	95,643	Okla. .	32,270
Tex. . .	55,970	N. C. .	28,169
Pa . . .	44,016	Tenn .	27,890
Ark . .	39,730	N. J . .	25,875
Ohio. .	35,713	Mich. .	25,460

STATE	ACRES
W. Va	24,786
Va . . .	21,664
Ky . . .	21,640
Ala. . .	19,175
Ill. . . .	16,982
Ind . . .	13,087
Miss . .	12,373
Md. . .	11,766
S. C . .	11,080
Other .	707,723
U. S . .	800,420

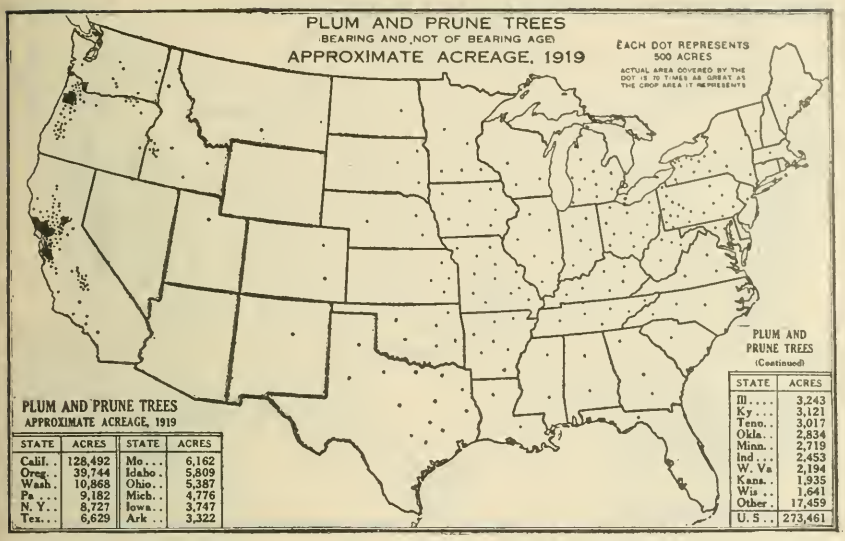
FIG. 64.—Three major centers of peach acreage are shown on the map—the early peach district in central Georgia, the late peach district along Lake Ontario in New York, and the canning and dried peach districts in California. An important peach district is rapidly developing in Moore County, N. C. Minor centers may be noted in southern New Jersey, in western Maryland and adjacent counties of West Virginia, along the Michigan shore of Lake Michigan, in western Arkansas, and in northeastern Texas. Cold, dry winters prevent peaches being grown to the northwest of a line drawn from Chicago to Omaha, thence to Amarillo, Tex. The influence of the Great Lakes in tempering winter temperatures on their leeward shores and retarding growth in spring till danger of frost is past is evident on the map.



STATE	BUSHELS	STATE	BUSHELS
Calif .	15,969,073	Wash.	1,544,859
Ga. . .	4,788,718	Tenn .	1,285,441
Tex. . .	4,620,679	Mo. . .	1,262,723
Ark. . .	3,340,823	N. Y. .	1,262,480
Okla . .	2,924,842	Pa. . .	1,099,735
N. J. . .	1,653,223	Ala. . .	1,083,142

STATE	BUSHELS
Utah . .	883,950
Miss. .	775,885
Colo. . .	721,480
W. Va.	706,411
Va. . . .	681,528
Ohio . .	617,537
Md. . .	564,111
Oreg. .	504,441
N. C. . .	479,218
Other .	3,915,783
U. S. . .	50,686,082

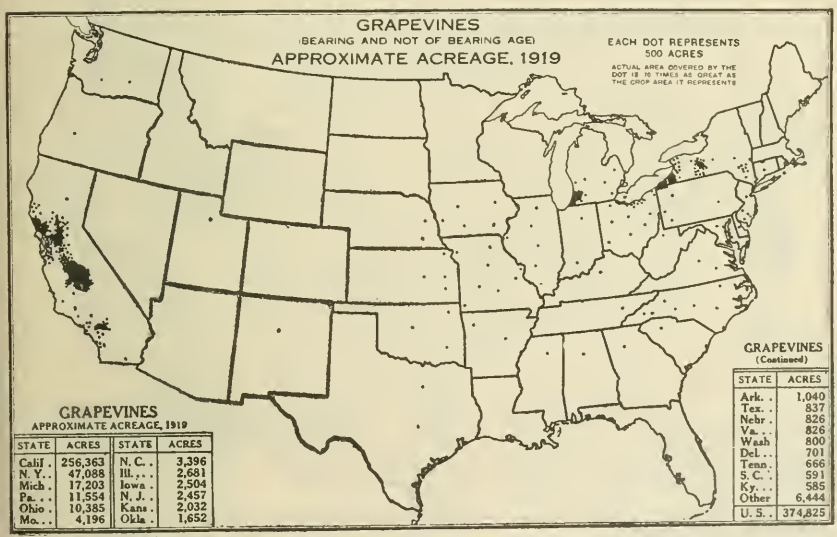
FIG. 65.—California produced nearly one-third of the Nation's crop of peaches in 1919, Fresno County alone producing one-tenth. Georgia ranked second, with Texas a close third. The New York crop was greatly reduced by a late freeze, but the New Jersey crop was large. It is worth noting that the production of peaches this year did not extend nearly as far to the north and west as the acreage. The Yakima Valley in Washington, the peach belt east of Great Salt Lake in Utah, and the Grand Junction-Delta district in Colorado show a production disproportionate to the acreage. The season of 1919 was generally favorable. Although the number of bearing peach trees in the United States dropped from 94 million in 1910 to 65 million in 1920, the production was 40 per cent greater in 1919 than in 1909.



STATE	ACRES	STATE	ACRES
Calif.	128,492	Mo.	6,162
Oreg.	39,744	Idaho	5,809
Wash.	10,868	Ohio	5,387
Pa.	9,182	Mich.	4,776
N. Y.	8,727	Iowa	3,747
Tex.	6,629	Ark.	3,322

STATE	ACRES
Ill.	3,243
Ky.	3,121
Tenn.	3,017
Okla.	2,834
Minn.	2,719
Ind.	2,453
W. Va.	2,194
Kans.	1,935
Wis.	1,641
Other	17,459
U. S.	273,461

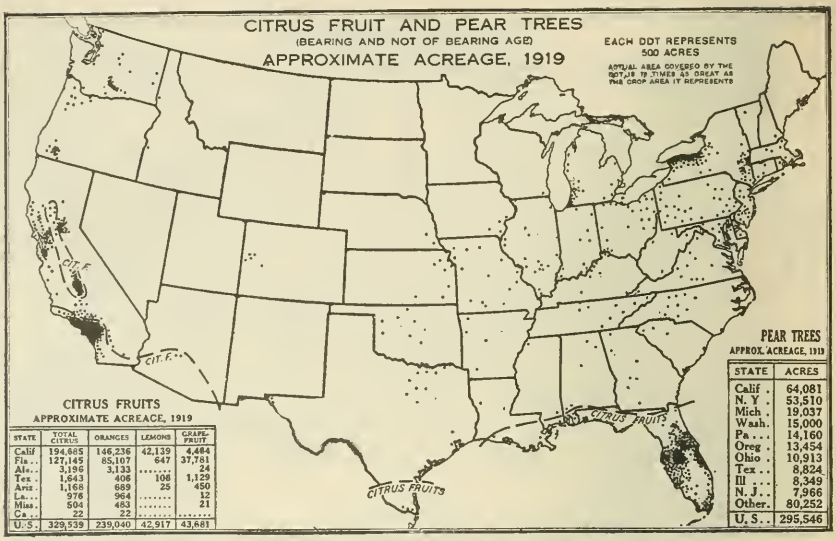
FIG. 66.—Nearly half of the Nation's acreage of plum and prune trees is in California, and nearly a third is in the five counties of Santa Clara, Sonoma, Placer, Napa, and Solano. One-twelfth more is in Marion, Polk, and Yamhill counties, Oreg. These eight counties produced 51 per cent of the total crop in 1919, and 57 per cent of the commercial crop. A smaller center may be noted in Clarke County, Wash., and a scattered acreage in the upper Willamette and Umpqua Valleys, Oreg., in the Sacramento Valley and in Fresno County, Calif. Prunes constitute nearly the entire production in these States. The scattered dots in the eastern half of the United States are practically all plums.



STATE	ACRES	STATE	ACRES
Calif.	256,363	N. C.	3,396
N. Y.	47,088	Ill.	2,681
Mich.	17,203	Iowa	2,504
Pa.	11,554	N. J.	2,457
Ohio	10,385	Kans.	2,032
Mo.	4,196	Okla.	1,652

STATE	ACRES
Ark.	1,040
Tex.	837
Nebr.	826
Va.	826
Wash.	800
Del.	701
Tenn.	666
S. C.	591
Ky.	585
Other	6,444
U. S.	374,825

FIG. 67.—Two-thirds of the Nation's acreage of grapes is in California. The raisin district centers around Fresno, where the land is flat and the sunshine almost continuous, while the wine grapes are grown mostly on the slopes of the valleys that open into San Francisco Bay. These wine grapes are now used largely for raisins. A smaller center may be noted in southern California near San Bernardino. In the East the principal grape district extends along the southern shore of Lake Erie from Erie to Buffalo. Minor centers may be seen in the Finger Lakes district of New York, the south shore of Lake Erie in Ohio, and in the southwestern corner of Michigan. These eastern grapes are mostly consumed fresh or made into grape juice.

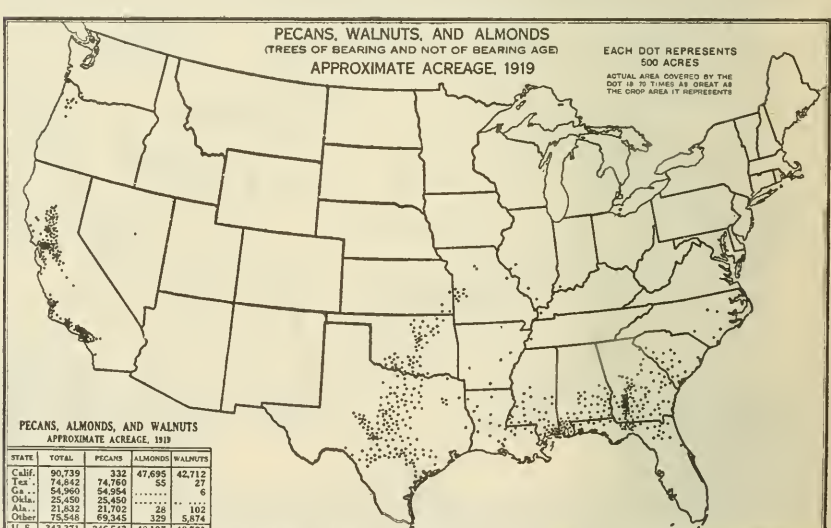


STATE	TOTAL CITRUS	ORANGES	LEMONS	GRAPEFRUIT
Calif	194,665	146,236	42,139	4,484
Fla..	127,145	85,107	647	37,781
Ala..	3,196	3,133		24
Tex..	1,643	406	106	1,129
Ariz.	1,168	689	25	450
La....	976	964		12
Miss..	504	483		21
Ga ..	22	22		
U. S..	329,539	239,040	42,917	43,681

STATE	ACRES
Calif .	64,081
N. Y .	53,510
Mich .	19,037
Wash.	15,000
Pa ...	14,160
Oreg .	13,454
Ohio .	10,913
Tex ..	8,824
Ill ...	8,349
N. J..	7,966
Other.	80,252
U. S..	295,546

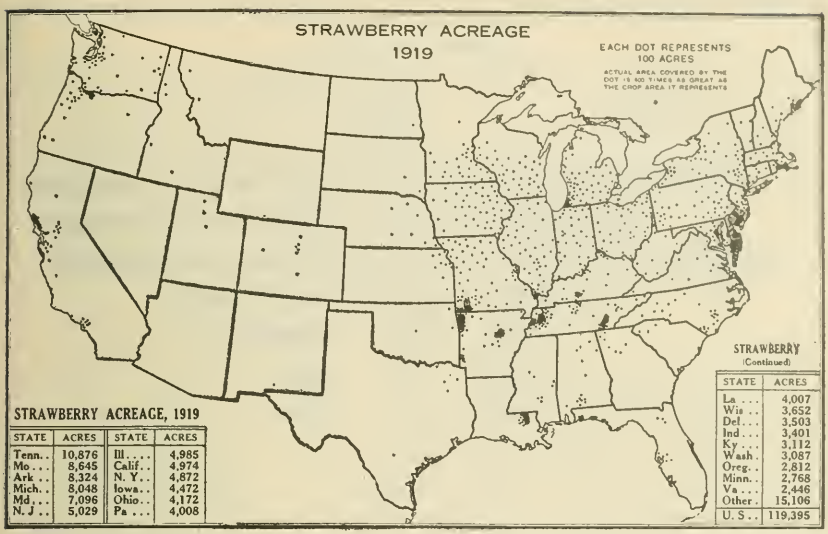
FIG. 68.—Citrus fruits can withstand only a few degrees of frost. About three-fifths of the acreage is in California and nearly two-fifths in Florida. There are a few orchards in the Mississippi Delta in Louisiana, in the Brownsville, Tex., district, and near Phoenix, Ariz., and recently hardy Satsuma orange trees have been planted along the Gulf coast in eastern Texas, southern Mississippi, and Alabama. Lemons are practically confined to California, grapefruit largely to Florida, while oranges are grown in both States.

The principal pear districts are the Ontario shore counties and the Hudson Valley of New York, southwestern Michigan along the lake, the foothills of central and southern California, western Oregon, and the Yakima Valley of Washington.



STATE	TOTAL	PECANS	ALMONDS	WALNUTS
Calif.	90,739	332	47,695	42,712
Tex..	74,842	74,760	55	27
Ga ...	54,960	54,954		6
Okla.	25,450	25,450		
Ala..	21,632	21,702	28	102
Other	75,548	69,345	329	5,874
U. S.	343,371	246,543	48,107	48,721

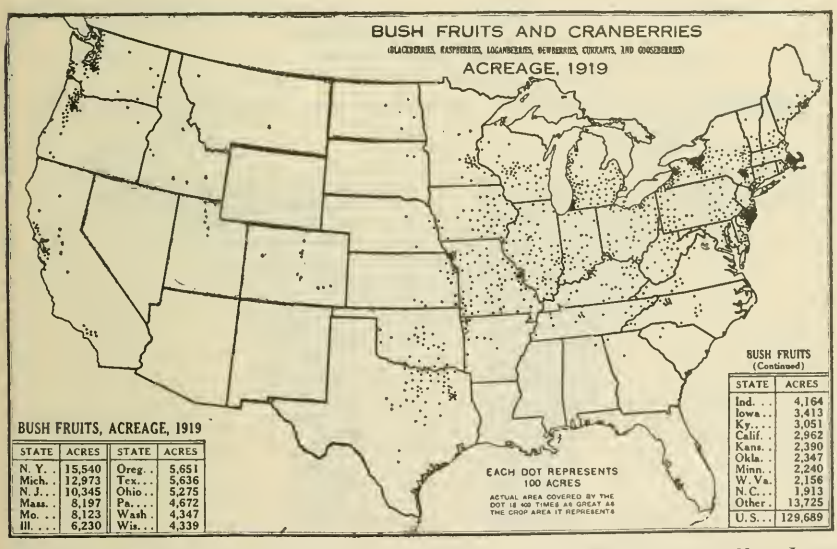
FIG. 69.—Only three kinds of nuts are produced on a commercial scale in the United States—pecans, walnuts, and almonds. The pecan is native to the lower Mississippi Valley, and the largest acreage is found in a belt which extends from central Missouri across Oklahoma to south-central Texas. Recently extensive planting of pecan trees has taken place on the coastal plain in Georgia, the Carolinas, Alabama, Mississippi, and northern Florida. Almonds and walnuts have been introduced from the Mediterranean region and their production is practically confined to California, except for a considerable acreage of walnuts in the Willamette Valley of Oregon and adjoining counties in Washington.



STRAWBERRY ACREAGE, 1919

STATE	ACRES	STATE	ACRES
Tenn. .	10,876	Ill. . . .	4,985
Mo. . .	8,645	Calif. .	4,974
Ark . .	8,324	N. Y. .	4,872
Mich. .	8,048	Iowa. .	4,472
Md. . .	7,096	Ohio. .	4,172
N. J . .	5,029	Pa . . .	4,008

FIG. 70.—The commercial production of strawberries has become concentrated in unusual degree in a few centers, notably, in Cumberland, Camden, Burlington, and Atlantic Counties, N. J.; Sussex County, Del.; Wicomico, Worcester, Caroline, and Anne Arundel Counties, Md.; in Hamilton, Rhea, Crockett, Gibson, Lauderdale, and Madison Counties, Tenn.; in Warren County, Ky.; in Barry, Lawrence, McDonald, and Newton Counties, Mo., and adjacent counties of Washington and Benton in Arkansas; in White County, Ark.; in Tangipahoa Parish, La.; in Berrien County, Mich.; in Sonoma, Sacramento, and Los Angeles Counties, Calif.; and in Hood River County, Oreg. These 30 counties, out of the 3,000 in the United States, contained one-third of the Nation's acreage of strawberries in 1919.



BUSH FRUITS, ACREAGE, 1919

STATE	ACRES	STATE	ACRES
N. Y. .	15,540	Oreg. .	5,651
Mich. .	12,973	Tex. . .	5,636
N. J. . .	10,345	Ohio . .	5,275
Mass. .	8,197	Pa. . . .	4,672
Mo. . .	8,123	Wash .	4,347
Ill. . . .	6,230	Wis. . .	4,339

FIG. 71.—The centers of cranberry acreage are Cape Cod Mass., southern New Jersey, and central Wisconsin—all districts of sandy, marshy, acid soils. The centers of bush fruit acreage are southern New Jersey; the Marlboro district in the Hudson Valley of New York; the district east and southeast of Rochester; the belt along Lake Erie from Buffalo to Cleveland; the eastern shore of Lake Michigan, especially Berrien County; the eastern shore of Puget Sound, especially the Puyallup district; and the Willamette Valley in Oregon, especially the district around Salem. This latter district specializes in loganberries grown for canning and bottling. Minor centers may be noted near many of the large cities.

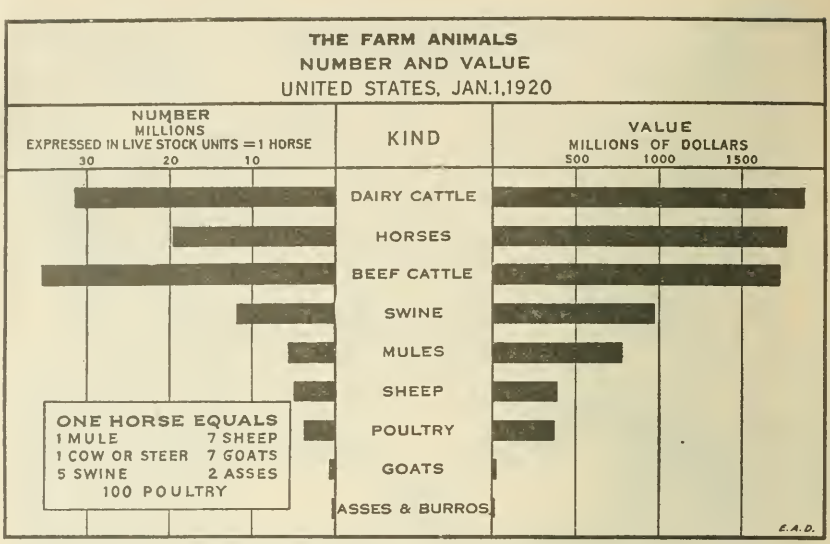


FIG. 72.—Cattle in 1920 constituted the leading class of live stock in the United States on the basis of value. This value was almost equally divided between the dairy and beef types. Between 1910 and 1920 the total value of cattle in the United States increased 143 per cent, due mostly to an increase in value per head of 125 per cent; whereas the value of all horses decreased 14 per cent, due to exactly the same decrease in value per head. Cattle constituted 46 per cent of the value of all farm animals, horses and mules 32 per cent, swine 12 per cent, sheep and goats 5 per cent, and poultry nearly 5 per cent. The swine, however, produce annually pork and lard having a value greater than that of the beef and veal from the cattle.

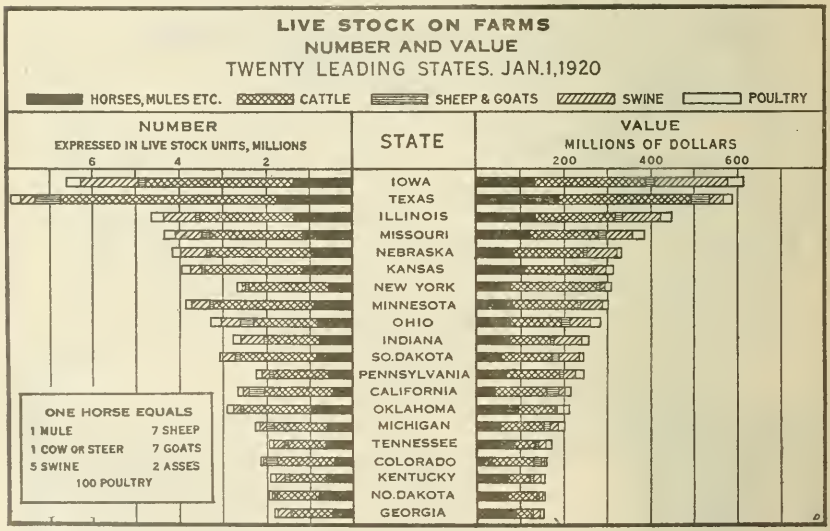


FIG. 73.—Iowa leads the States in value of live stock on farms, but is exceeded by Texas in number of animal units. It is noteworthy that 9 of the 11 leading States in value of live stock are located wholly or partly in the Corn Belt. On the other hand, Georgia is the only State lying almost wholly in the Cotton Belt that is included in this list of 20 leading live-stock States. The concentration of live stock in the Corn Belt, and in the dairying centers of the Hay and Pasture Region is shown in Figure 107. Cattle and horses and mules, it will be noted, constitute in the different States from six-tenths to nine-tenths of the value of all live stock.

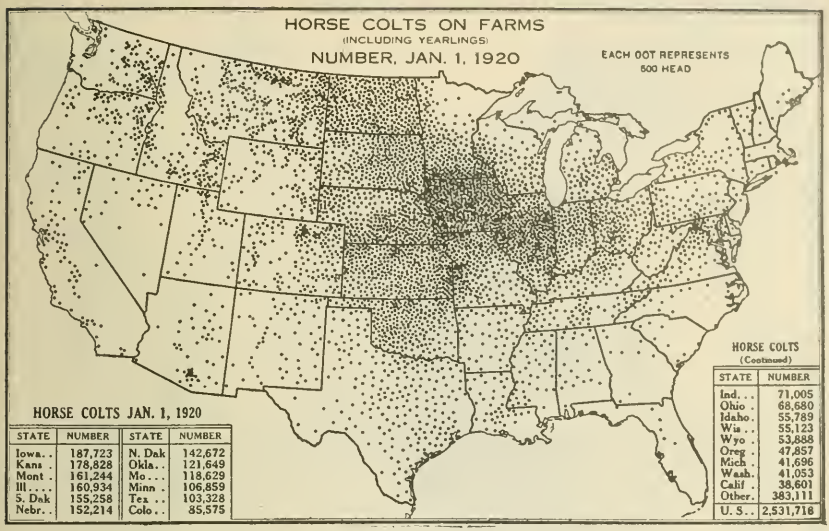


FIG. 74.—One-third of the horses in the United States are raised in the Corn Belt, one-sixth in the Great Plains Region, one-tenth in the Spring Wheat Area, and one-twelfth in the Kansas-Oklahoma section of the Corn and Winter Wheat Region. These are the regions of surplus grain and cheap forage. Comparatively few horses are raised in the Cotton Belt, or the Central and North Atlantic States, because these are regions of deficient grain production and feed must be shipped in at heavy expense. It is more economical to ship the mature horses into these deficiency regions than to ship the grain to grow them. (See Figs. 11, 12, 27, 32, 33, 36, and 41.)

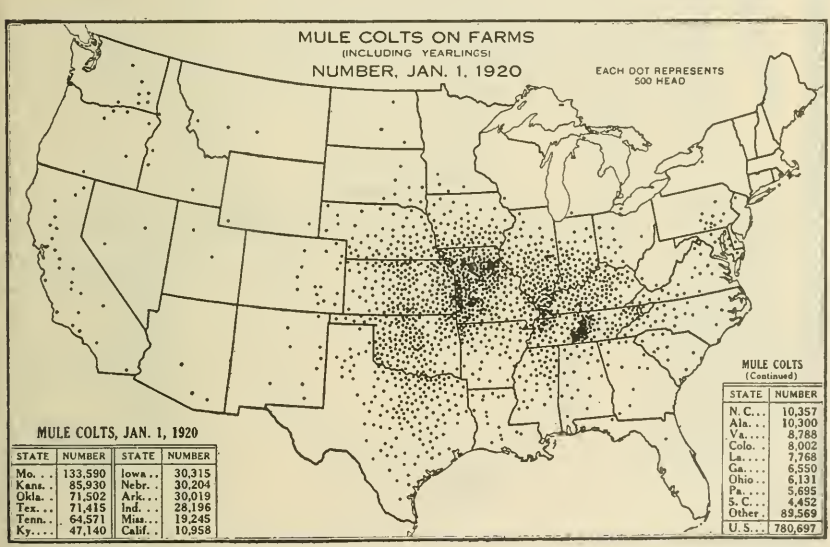
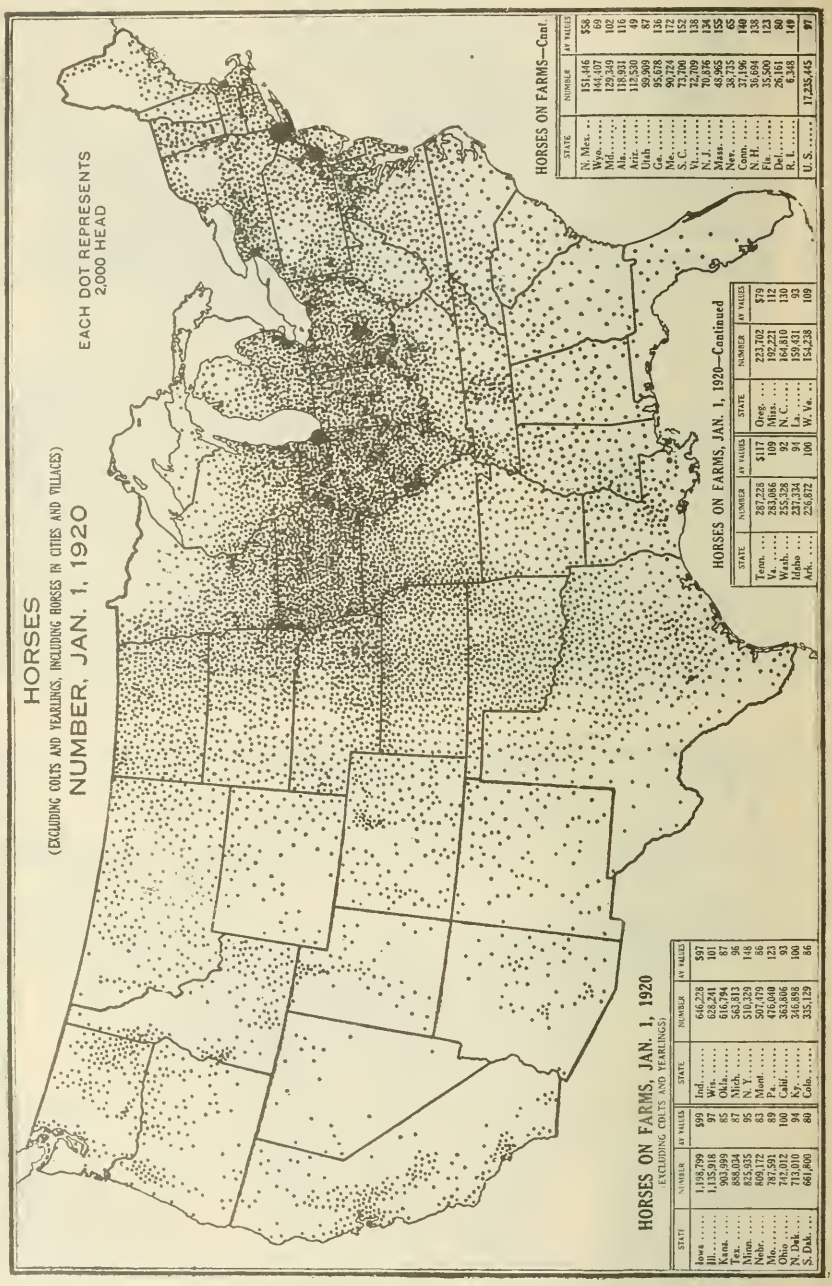


FIG. 75.—Two-thirds of the mules are raised in the western section of the Corn and Winter Wheat Region and the southern portion of the Corn Belt, the centers of production being about 300 miles south of the centers of horse production. This may be due in part to the adaptation of the mule to warmer temperature than the horse, but also in part to the shorter distance and smaller cost of transportation to the Cotton Belt, where most of the mules are sent (see Fig. 77). Formerly Kentucky and Tennessee were the leading States in mule production, but now a much greater number are raised in Missouri, Kansas, and Oklahoma, where feed is cheaper.

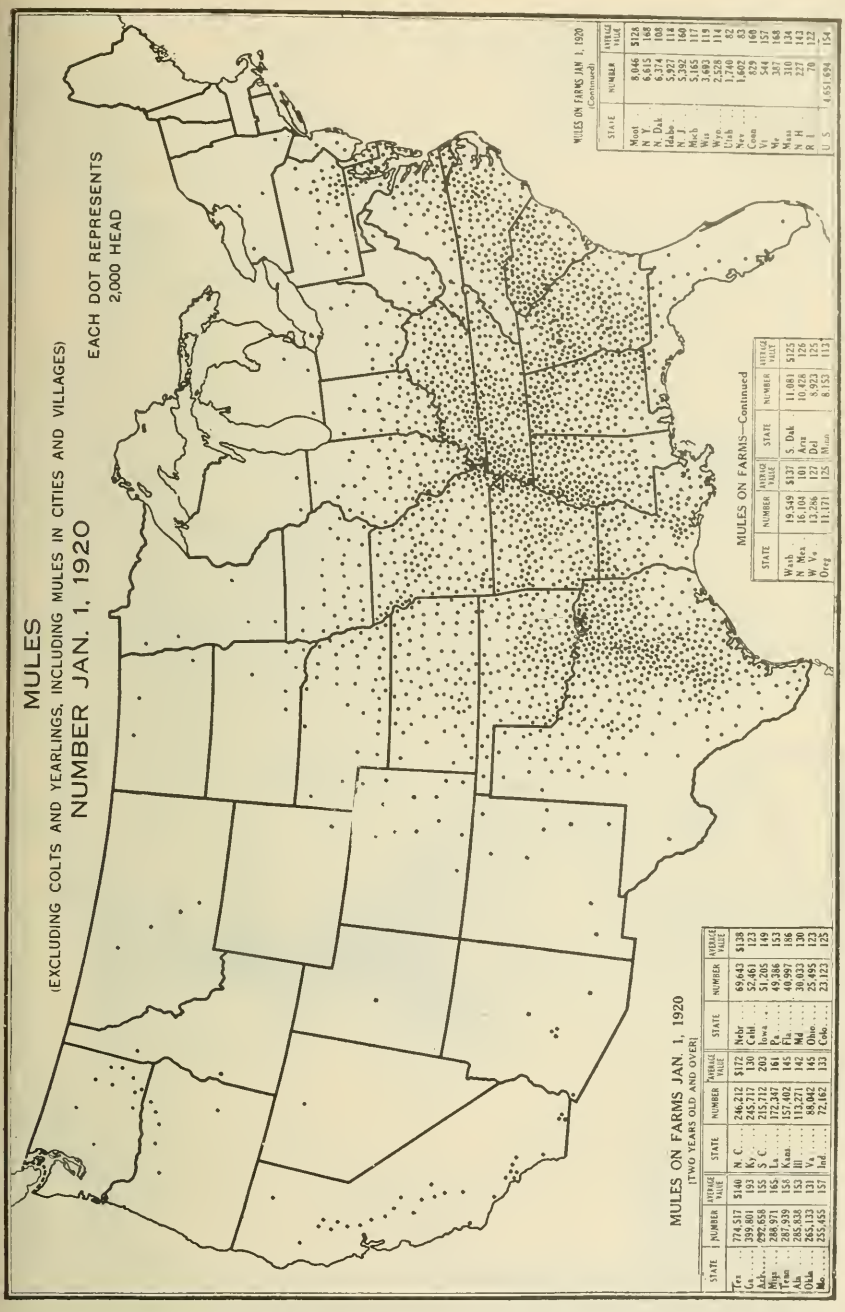


STATE	NUMBER	AV VALUES
Iowa	1,198,799	$99
Ill.	1,135,918	97
Kans.	903,999	85
Tex.	888,034	87
Minn.	825,935	95
Nebr.	809,172	83
Mo.	787,591	89
Ohio	747,522	103
N. Dak.	713,010	94
S. Dak.	661,800	80
Ind.	646,228	597
Wis.	628,241	101
Okla.	616,794	87
Mich.	563,813	96
N. Y.	510,329	148
Mont.	507,479	86
Pa.	476,606	123
Calif.	365,040	91
Ky.	346,898	100
Colo.	335,129	86

STATE	NUMBER	AV VALUES
Tenn.	287,226	$117
Va.	283,096	109
Wash.	253,328	97
Idaho	237,334	91
Ark.	236,872	100
Oreg.	223,702	$79
Miss.	182,611	112
N. C.	165,871	130
La.	159,431	93
W. Va.	154,238	109

STATE	NUMBER	AV VALUES
N. Mex.	151,446	$58
Wyo.	144,107	69
Md.	129,349	102
Ala.	118,931	116
Ariz.	112,530	49
Utah	99,999	87
Colo.	98,878	136
Me.	90,224	172
S. C.	73,200	152
Vt.	72,709	138
N. J.	70,876	134
Mass.	48,965	155
Nev.	38,135	65
Conn.	37,196	140
N. H.	35,694	138
Fla.	35,500	123
Del.	26,161	80
R. I.	6,348	149
U. S.	17,255,445	97

FIG. 76.—Over one-quarter of the mature horses (2 years old and over) in the United States are in the Corn Belt, and over three-quarters are in the humid eastern half of the country. The small number of horses in the Cotton Belt and the eastern sections of the Corn and Winter Wheat Region is owing in large measure to the preference for mules as work animals in these regions (see Fig. 77). The acres of crops per mature horse and mule in the Cotton Belt (17 acres) is practically the same as in the Corn Belt (18 acres), or in the Hay and Pasture Region (16 acres). The number of horses in cities and villages ("not on farms or ranges") was 1,705,611 on January 1, 1920, or about one-tenth the number of mature horses on farms.



STATE	NUMBER	AVERAGE VALUE	STATE	NUMBER	AVERAGE VALUE	STATE	NUMBER	AVERAGE VALUE
Tex.	374,517	$140	N. C.	246,212	$172	Nebr.	69,643	$138
Ark.	299,801	152	Ky.	245,772	130	Calif.	52,461	123
Miss.	292,658	152	S. C.	215,211	200	Iowa	51,305	169
Tenn.	288,971	165	La.	172,347	161	Pa.	49,386	153
Mo.	287,939	158	Kans.	157,402	145	Fla.	40,997	186
Ala.	285,838	153	Ill.	113,271	142	Md.	30,033	130
Okla.	265,133	131	Va.	98,042	145	Ohio	25,495	123
Ga.	255,455	157	Ind.	72,162	133	Colo.	23,123	125

STATE	NUMBER	AVERAGE VALUE	STATE	NUMBER	AVERAGE VALUE	STATE	NUMBER	AVERAGE VALUE
Wash.	19,549	$137	S. Dak.	11,081	$125			
N. Mex.	16,104	101	Ariz.	10,428	126			
W. Va.	13,286	127	Del.	8,923	125			
Oreg.	11,171	125	Minn.	8,153	113			

STATE	NUMBER	AVERAGE VALUE
Mont.	8,046	$126
N. Y.	6,615	148
N. Dak.	6,374	108
Idaho	5,927	118
N. J.	5,582	160
Mich.	5,465	117
Wis.	3,403	111
Wyo.	2,528	114
Utah	1,740	82
Nev.	1,602	83
Conn.	829	140
Vt.	544	157
Me.	345	146
Mass.	310	134
N. H.	227	143
R. I.	70	122
U. S.	4,651,894	154

FIG. 77.—About five-sixths of the mature mules (2 years old and over) in the United States are in the Cotton Belt and the Corn and Winter Wheat Region. In the eastern Cotton Belt (east of Texas and Louisiana), where negro farmers are most numerous (see Figs. 116 and 117), there are twice as many mature mules as horses. The popularity of mules is also increasing in the North and West. Whereas the number of horses over 1 year of age on farms in the United States was only 6 per cent greater in 1920 than in 1910, the number of mules increased 33 per cent. This rate of increase was almost as great in the North as in the South. Mules, it will be noted, are used on farms in every State of the Union.

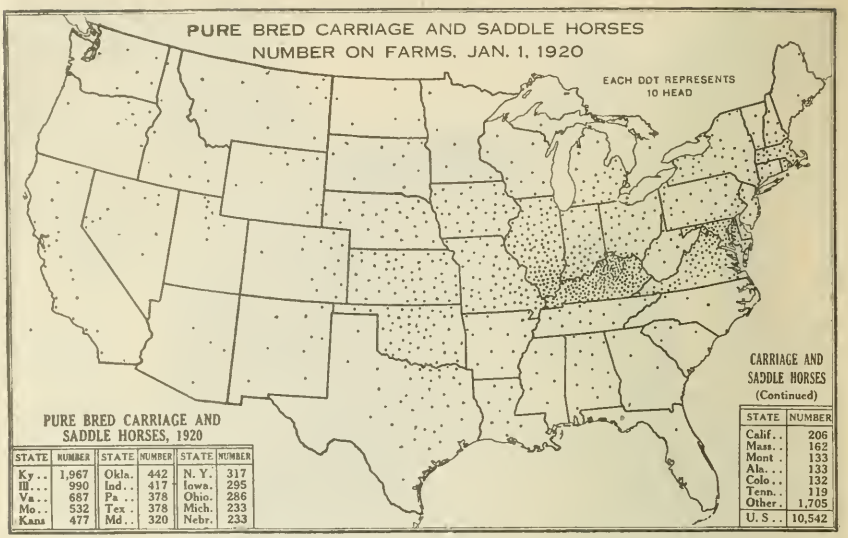


FIG. 78.—The number of pure-bred horses of saddle and carriage breeds in the United States was only about one-ninth the number of those of draft breeds in 1920. The relatively large number of these saddle and carriage horses in Kentucky and adjacent portions of Illinois and Indiana, also in Virginia and Maryland, is noteworthy. These are areas famous in song and story for their fine horses, and despite the decline of horse racing as a sport, and the decreased use of horses for riding and driving, breeders and horse fanciers in these States retain a large number of pure-bred saddle and carriage horses. Probably only a small number, however, are used for breeding.

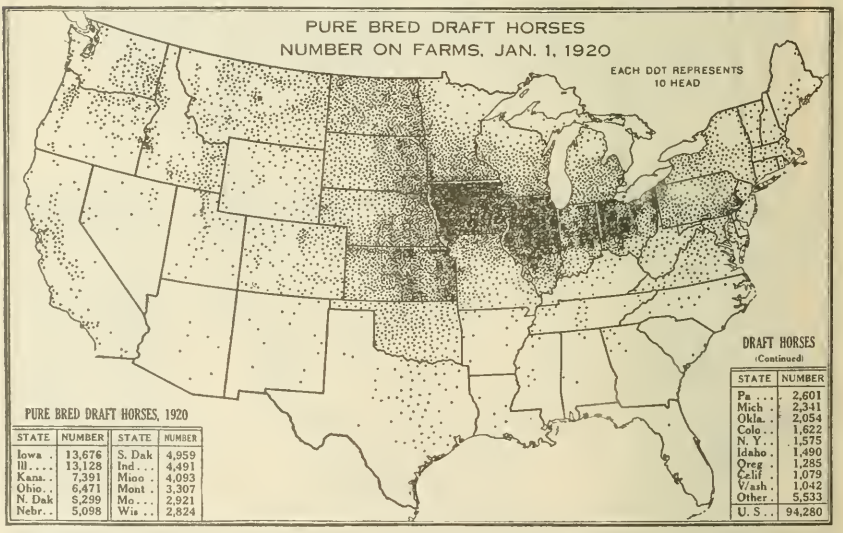
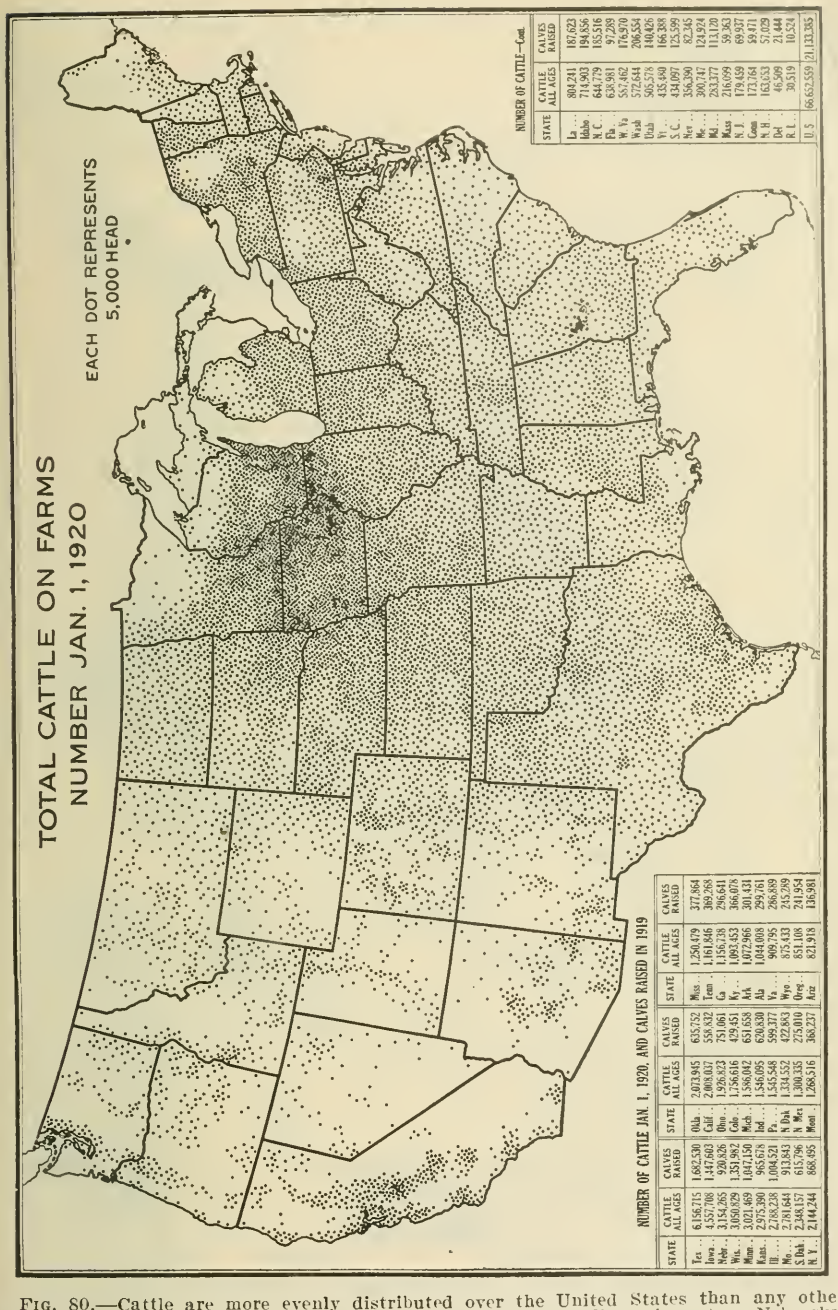


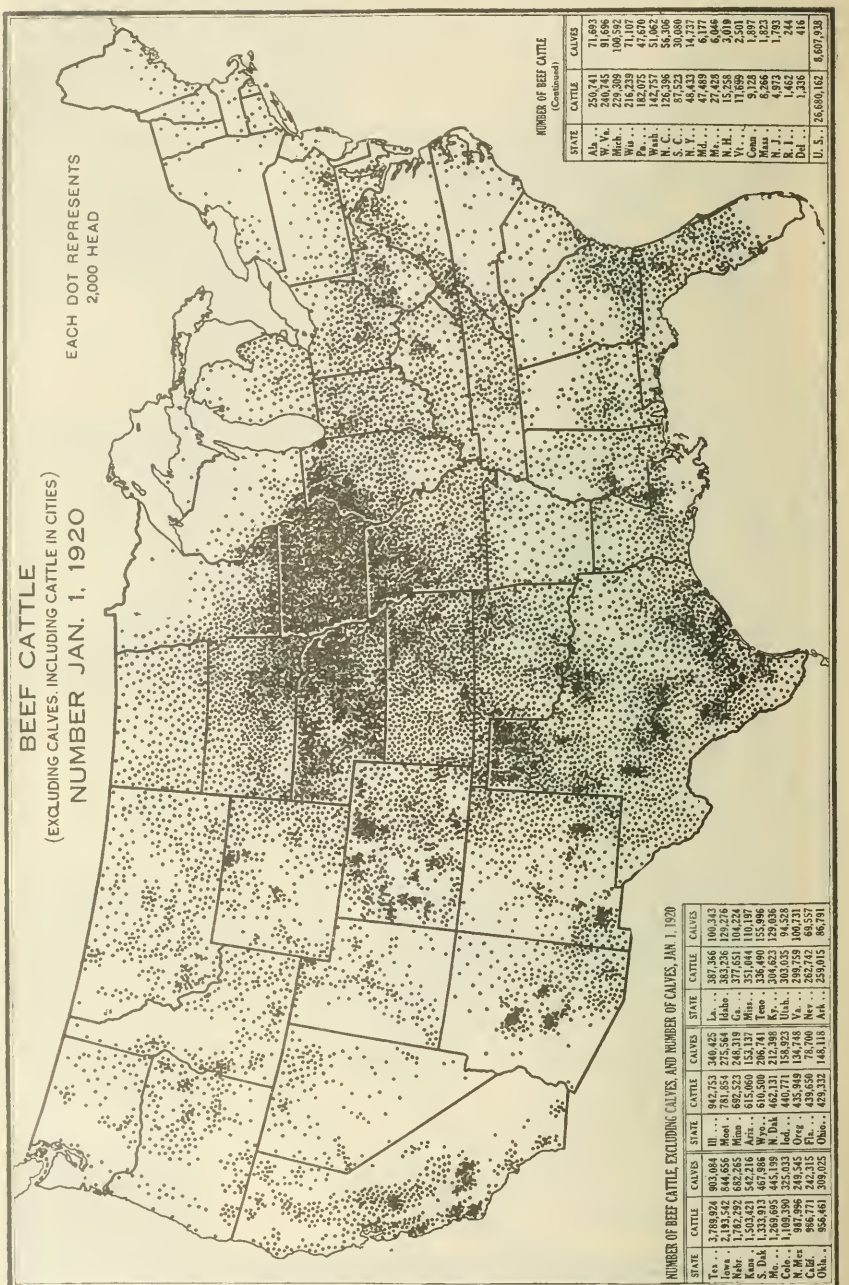
FIG. 79.—About half the pure-bred draft horses in the United States are in the Corn Belt, and most of the other half are in the Hay and Pasture, Spring Wheat, and Great Plains Regions. Very few are found in the South or Southwest. In California, Oregon, Washington, and Idaho, however, pure-bred draft horses relative to the total number of horses are almost as common as in the Corn Belt. Three-fourths of the pure-bred draft horses in the United States are Percherons, 10 per cent are Belgians, 5 per cent are Shires, and 4 per cent are Clydesdales, other breeds constituting the remainder.



STATE	CATTLE ALL AGES	CALVES RAISED
La.	804,241	187,623
Idaho	714,903	184,556
N. C.	647,979	97,228
Fla.	638,981	176,970
W. Va.	587,462	206,584
Wash.	572,644	140,426
Utah	505,578	166,388
Vt.	435,890	125,599
S. C.	434,097	82,345
Nev.	356,390	124,924
Me.	300,747	113,120
Md.	283,377	59,363
Mass.	216,099	69,937
N. J.	179,459	57,171
Conn.	172,584	51,078
N. H.	165,353	46,500
Del.	46,500	21,444
R. I.	30,519	10,524
U. S.	66,652,559	21,133,385

STATE	CATTLE ALL AGES	CALVES RAISED	STATE	CATTLE ALL AGES	CALVES RAISED	STATE	CATTLE ALL AGES	CALVES RAISED
Tex.	6,156,715	1,682,530	Okla.	2,073,945	635,752	Miss.	1,250,479	377,864
Iowa	5,573,700	1,477,680	Calif.	2,000,107	558,832	Tenn.	1,161,846	309,268
Nebr.	3,154,265	930,826	Minn.	1,926,823	751,061	Ga.	1,156,728	296,641
Wis.	3,050,029	1,351,962	Colo.	1,756,616	429,451	Ky.	1,093,453	366,076
Minn.	3,021,469	1,047,150	Mich.	1,586,042	651,658	Ark.	1,072,966	301,431
Kans.	2,975,390	965,678	Ind.	1,546,095	620,830	Ala.	1,044,008	299,761
Ill.	2,768,228	1,094,521	Pa.	1,545,568	599,377	Va.	909,795	286,889
Mo.	2,781,644	913,843	N. Dak.	1,334,552	422,883	Wyo.	875,433	235,799
S. Dak.	2,348,157	615,796	N. Mex.	1,300,335	275,010	Oreg.	851,108	241,954
N. Y.	2,144,244	868,695	Mont.	1,286,516	360,237	Ariz.	821,918	136,981

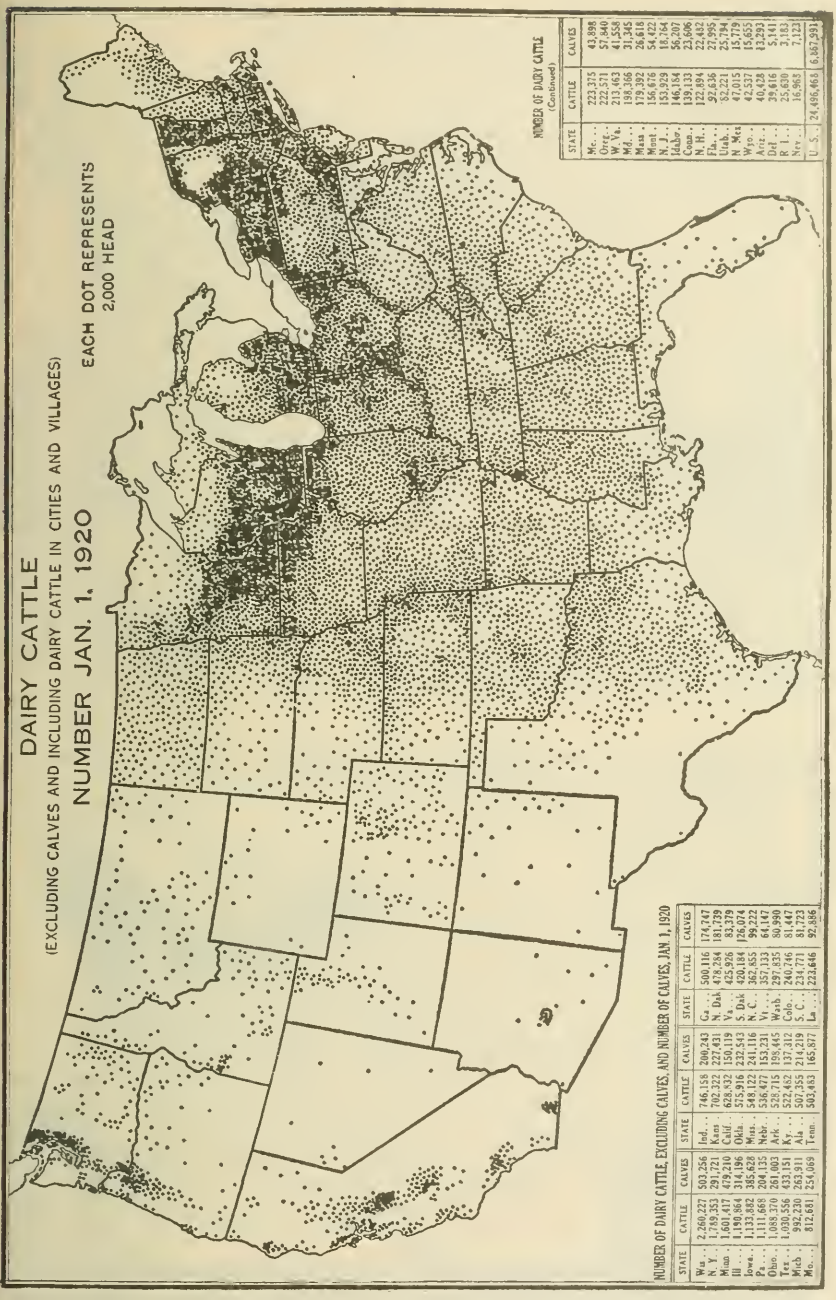
FIG. 80.—Cattle are more evenly distributed over the United States than any other kind of live stock. The densest area is in Iowa, northern Missouri, eastern Nebraska, southern Minnesota and Wisconsin, and northwestern Illinois. On January 1, 1920, there were about 14 million cattle in the Corn Belt, or 60 to the square mile; 12 million in the Hay and Pasture Region, which is 36 to the square mile; 10 million in the Corn and Winter Wheat Region, which is 32 to the square mile; 9 million in the Cotton Belt, or 21 to the square mile; and 9½ million in the Great Plains Region, or about 20 to the square mile. The seven other regions had about 14 million cattle, an average of 11 to the square mile. In Iowa there were 82 cattle to the square mile. (See Figs. 11, 27, and 38.)



STATE	CATTLE	CALVES	STATE	CATTLE	CALVES	STATE	CATTLE	CALVES
Tex.	3,789,924	903,084	Ill.	942,753	340,425	La.	387,366	100,343
Iowa	2,193,542	844,656	Mont.	781,854	275,564	Idaho	383,236	129,276
Nebr.	1,742,292	682,265	Minn.	682,523	248,319	Ga.	377,651	104,224
Kans.	1,503,421	542,216	Ariz.	615,060	153,137	Miss.	351,644	110,197
S. Dak.	1,333,913	467,896	Wyo.	610,300	206,741	Tenn.	330,823	155,896
Mo.	1,289,695	445,190	N. Mex.	542,113	172,961	Ky.	324,569	135,108
Colo.	1,109,390	325,033	Ind.	440,771	158,923	Utah	303,035	94,528
N. Mex.	987,996	249,545	Oreg.	435,949	134,748	Va.	299,759	100,731
Calif.	986,771	242,315	Fla.	439,650	78,700	Nev.	262,742	69,557
Okla.	956,461	309,025	Ohio	429,332	148,118	Ark.	259,015	86,791

STATE	CATTLE	CALVES	STATE	CATTLE	CALVES	STATE	CATTLE	CALVES
Ala.	250,741	71,693	Mich.	229,309	100,592	Pa.	182,075	47,670
W. Va.	250,747	91,698	Wis.	216,239	71,107	Wash.	142,757	51,062
N. C.	126,396	56,306	S. C.	87,523	30,000	N. J.	45,449	14,177
Md.	27,425	6,046	Del.	1,236	244	U. S.	26,680,162	8,607,938
N. H.	15,258	3,019	Vt.	11,699	2,501	Conn.	9,128	1,897
Mass.	8,266	1,823	R. I.	1,462	314			

FIG. 81.—Beef cattle constitute slightly over half the total number of cattle in the United States, but slightly less than half the value. Over 8 million beef cattle (including calves) are in the Corn Belt, and as many more in the Great Plains Region, these two regions having nearly half the beef cattle in the country. A large number of beef cattle will also be noted in the Subtropical Coast and southern portion of the Cotton Belt, in the Appalachian valleys, in eastern Kansas, in the mountain parks and valleys of Colorado, Utah, and Idaho, on the plateaus of southwestern New Mexico and southeastern Arizona, and in California. Over 40 per cent of the beef cattle are in the western half of the United States. (See Figs. 12, 27, and 42.) The corner table gives figures of beef cattle and of calves on farms only; there were 890,963 in cities and villages.



STATE	CATTLE	CALVES
Me.	223,375	43,998
Oreg.	222,571	57,840
W. Va.	213,463	41,558
Md.	184,565	26,646
Mass.	179,389	26,615
Mont.	156,676	54,422
N. J.	153,929	18,764
Idaho	146,184	56,207
Conn.	139,133	23,606
N. H.	122,694	22,482
Del.	97,226	15,799
Utah	52,225	23,594
N. Mex.	47,015	13,779
Wyo.	42,537	15,655
Ariz.	40,428	13,293
Dist.	39,616	5,141
R. I.	25,630	3,153
Nev.	16,965	7,123
U. S.	24,486,465	6,487,591

STATE	CATTLE	CALVES	STATE	CATTLE	CALVES	STATE	CATTLE	CALVES
Wis.	2,260,227	503,256	Ind.	746,158	200,243	Ga.	500,116	174,747
N. Y.	1,769,353	291,721	Kans.	702,322	227,431	N. Dak.	478,284	181,739
Minn.	1,609,417	479,340	Calif.	628,532	150,119	Va.	425,926	83,379
Ill.	1,190,864	314,196	Okla.	615,153	221,567	S. Dak.	420,184	126,014
Iowa.	1,133,682	385,628	Mich.	548,122	241,111	S. C.	362,554	98,222
Pa.	1,111,668	204,135	Nebr.	536,477	153,231	Vt.	357,133	64,147
Ohio.	1,089,370	261,003	Ark.	528,715	195,445	Wash.	297,835	80,990
Tex.	1,030,556	433,151	Ky.	522,462	137,312	Colo.	240,746	81,447
Mich.	992,230	265,911	Ala.	507,355	214,219	S. C.	234,771	81,723
Mo.	812,641	254,069	Tenn.	503,463	165,877	La.	223,646	92,886

FIG. 82.—Nearly half the dairy cattle in the United States are in the Hay and Pasture Region and the adjacent northern and eastern margin of the Corn Belt. Other dense areas will be noted in southeastern Pennsylvania, which is really Corn Belt country, and in the valleys of the North and South Pacific regions. In the Cotton Belt, especially the northern portion, dairy cattle are more numerous than beef cattle, but in the Great Plains, Rocky Mountain, and Arid Intermountain Regions they are much less numerous. Nine-tenths of the dairy cattle are in the East. The dairy cattle in cities and villages ("not on farms and ranges") number 1,220,564, which is less than 4 per cent of all dairy cattle and calves in the United States. (See Figs. 25, 40, and 85.)

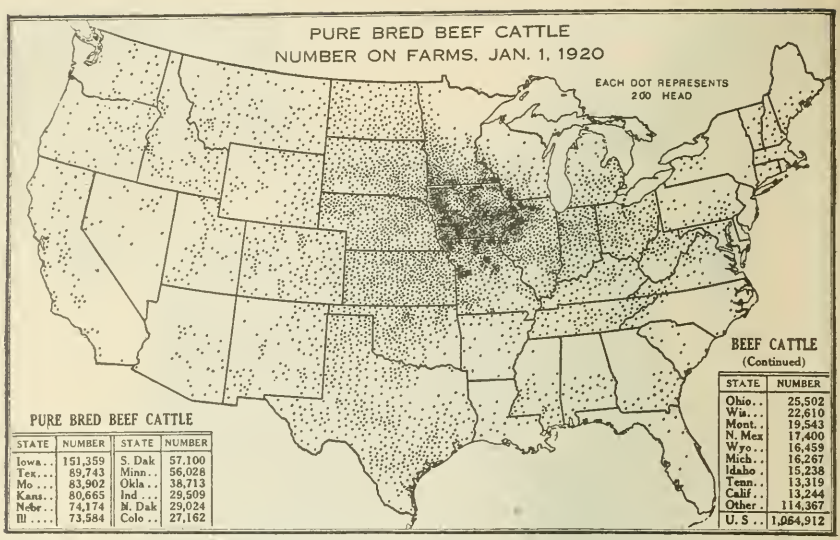


FIG. 83.—The number of registered pure-bred beef cattle is more concentrated geographically than that of all beef cattle. Iowa alone has one-seventh of the entire number in the United States. Five per cent of the beef cattle in Iowa are registered. The prairie and plains portion of the United States (see "tall grass" and "short grass" of Fig. 7) has nearly four-fifths of the pure-bred beef cattle in the country. About two-fifths of the registered beef cattle are Shorthorns—nearly one-half if Polled Durham be included—and nearly two-fifths more are Herefords. Aberdeen-Angus constitute about one-tenth of the total number. Iowa leads the States by a wide margin in number of Shorthorns and Aberdeen-Angus, while Texas leads in number of Herefords.

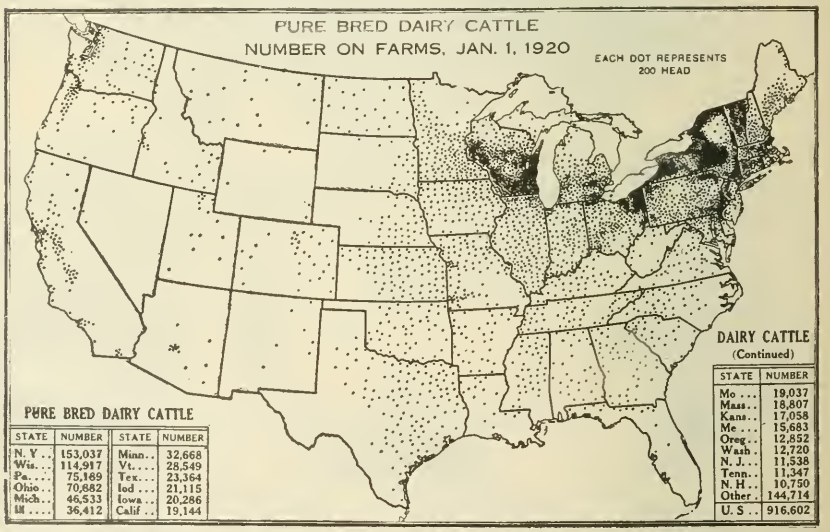


FIG. 84.—Sixty per cent of the registered pure-bred dairy cattle are concentrated in the Hay and Pasture Region. About 5 per cent of the dairy cattle in this region are registered. New York has one-sixth of the registered dairy cattle in the United States, and Wisconsin has one-eighth. Much smaller numbers may be noted in the valleys of California and of western Oregon and Washington. About 58 per cent of the registered dairy cattle in the United States are Holstein-Friesians, 25 per cent are Jerseys, 9 per cent are Guernseys, 3 per cent are Ayrshires, and 1 per cent Brown Swiss, the remainder being unspecified.

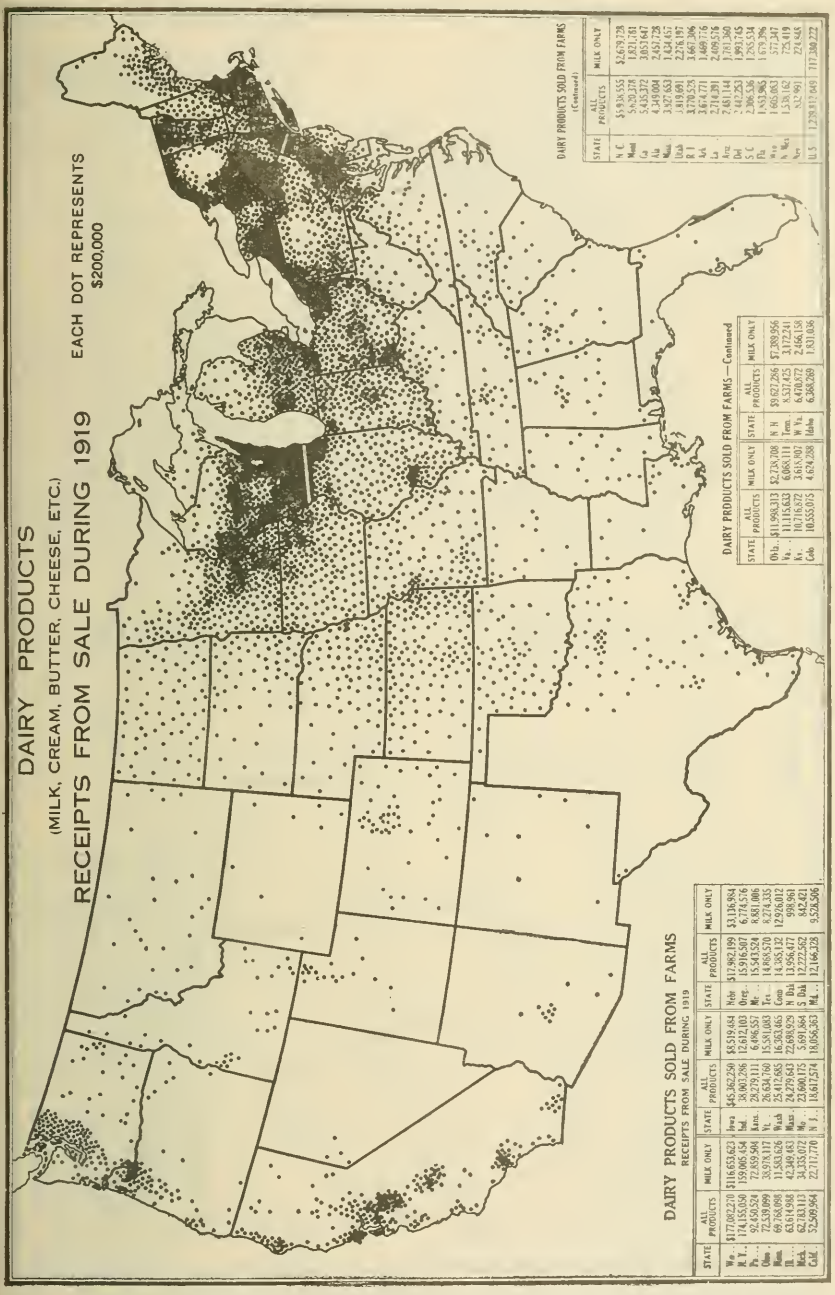
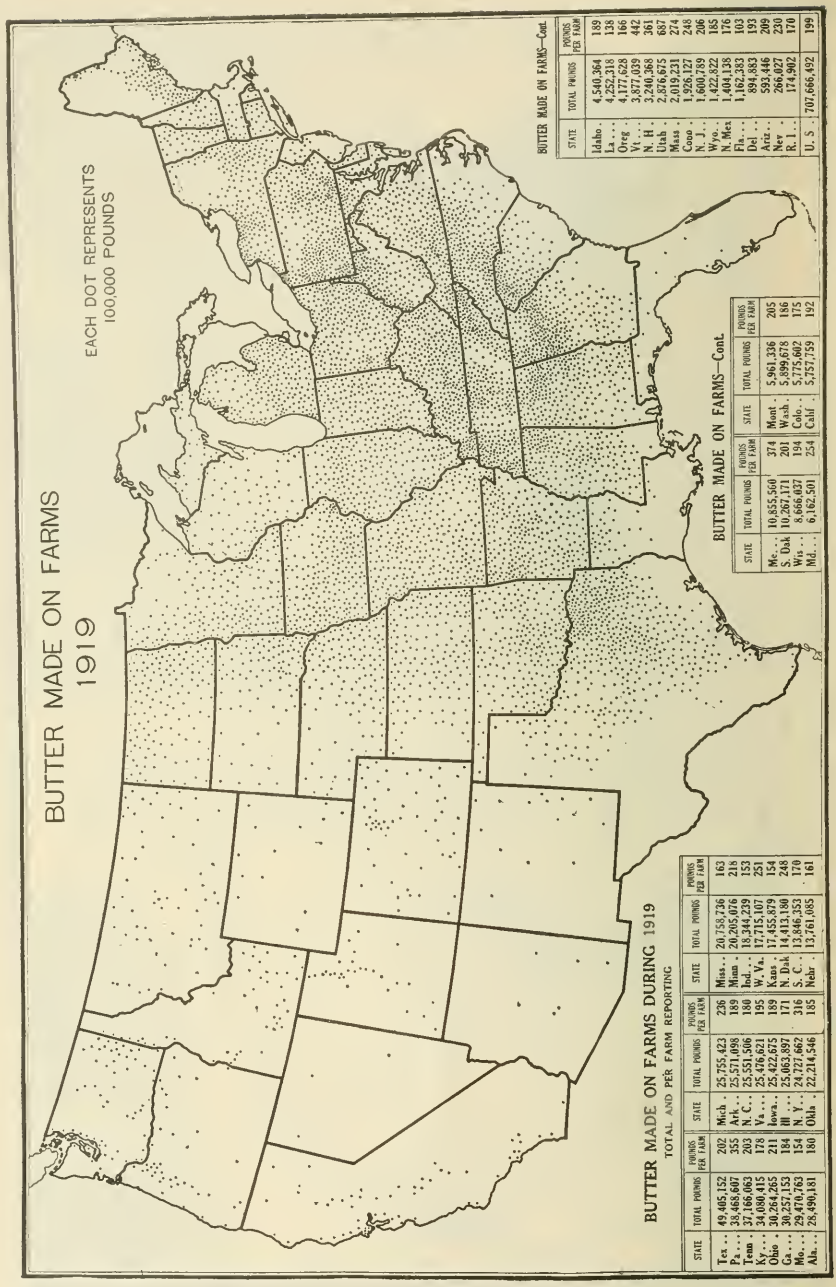


FIG. 85.—This map shows the commercial dairying districts. The concentration in the Hay and Pasture Region is much greater than that of dairy cattle (Fig. 82). Commercial dairy centers may also be noted near the large cities outside this region, notably Philadelphia, Baltimore, Washington, Cincinnati, Indianapolis, St. Louis, Kansas City, Los Angeles, and San Francisco. These, as also the centers adjoining New York City, Boston, Buffalo, Cleveland, and Detroit, represent market milk mostly; while the larger districts in central and northern New York, in Wisconsin, and in Minnesota represent milk and butter fat sold to creameries and cheese factories largely (see Figs. 86, 87, and 88). The value of dairy products consumed on the farm is estimated by the census at about $240,000,000.

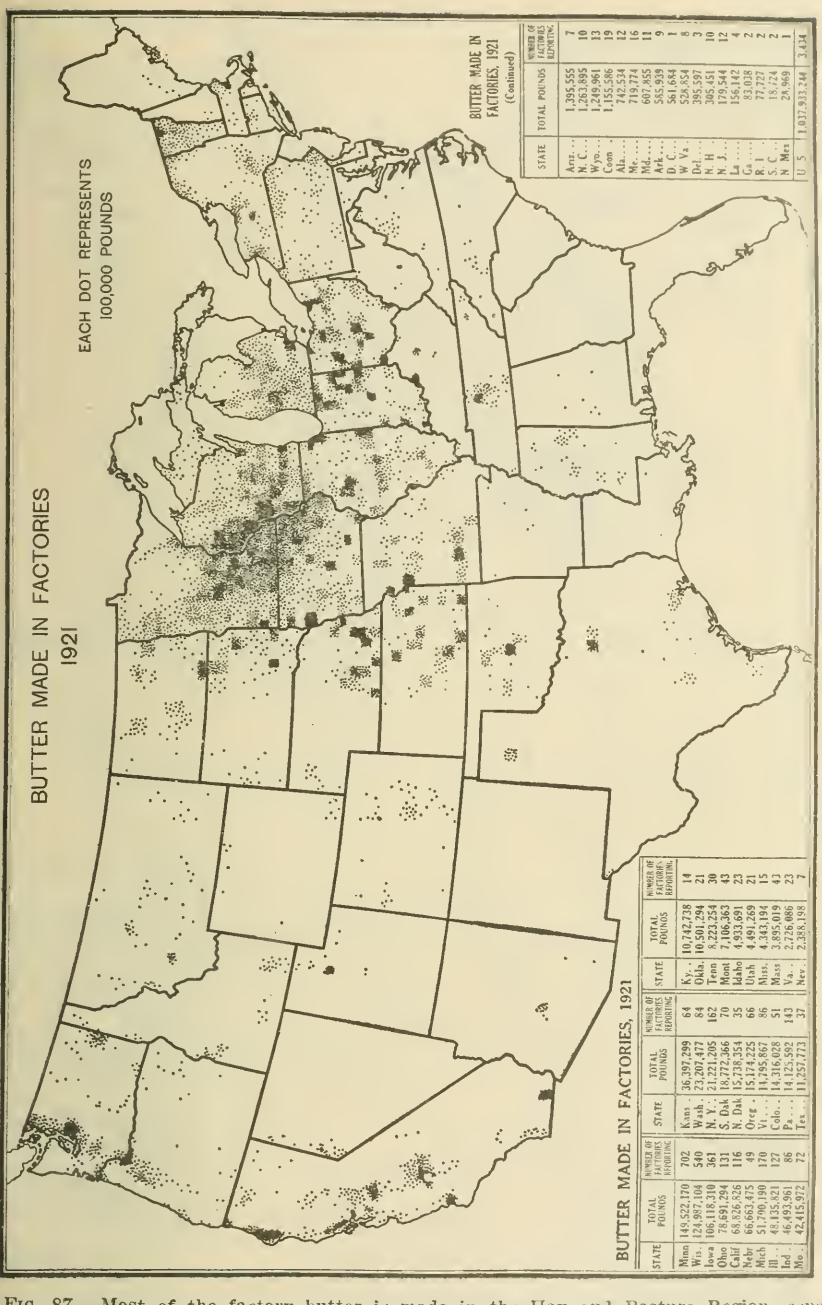


STATE	TOTAL POUNDS	POUNDS PER FARM	STATE	TOTAL POUNDS	POUNDS PER FARM	STATE	TOTAL POUNDS	POUNDS PER FARM
Tex.	49,405,152	202	Mich.	25,755,423	236	Miss.	20,758,736	163
Pa.	38,468,607	355	Ark.	25,571,098	189	Minn.	20,205,076	218
Tenn.	37,166,083	203	N. C.	25,551,506	180	Ind.	18,344,239	153
Ky.	34,080,415	178	Va.	25,476,621	195	W. Va.	17,715,107	251
Ohio	30,264,265	211	Iowa.	25,422,675	189	Kans.	17,455,879	154
Ga.	30,257,153	184	Ill.	25,063,897	171	N. Dak.	14,413,180	248
Mo.	29,470,763	154	N. Y.	24,727,662	316	S. C.	13,846,353	170
Ala.	28,490,181	180	Okla.	22,214,546	185	Nebr.	13,761,085	161

STATE	TOTAL POUNDS	POUNDS PER FARM
Idaho	4,540,364	139
La.	4,252,318	138
Oreg.	4,177,628	166
Vt.	3,877,039	442
N. H.	3,240,368	361
Utah	2,876,675	687
Mass.	2,019,231	274
Conn.	1,926,127	248
N. J.	1,600,789	206
Wyo.	1,422,822	185
N. Mex.	1,404,138	176
Fla.	1,162,383	103
R. I.	1,041,861	119
Ariz.	593,446	209
Nev.	266,027	230
R. I.	174,902	170
U. S.	707,666,492	199

STATE	TOTAL POUNDS	POUNDS PER FARM
Me.	10,855,560	374
S. Dak.	10,267,171	201
Wis.	8,666,037	194
Md.	6,162,501	254
Mont.	5,961,336	205
Wash.	5,899,678	186
Colo.	5,775,602	175
Calif.	5,757,755	192

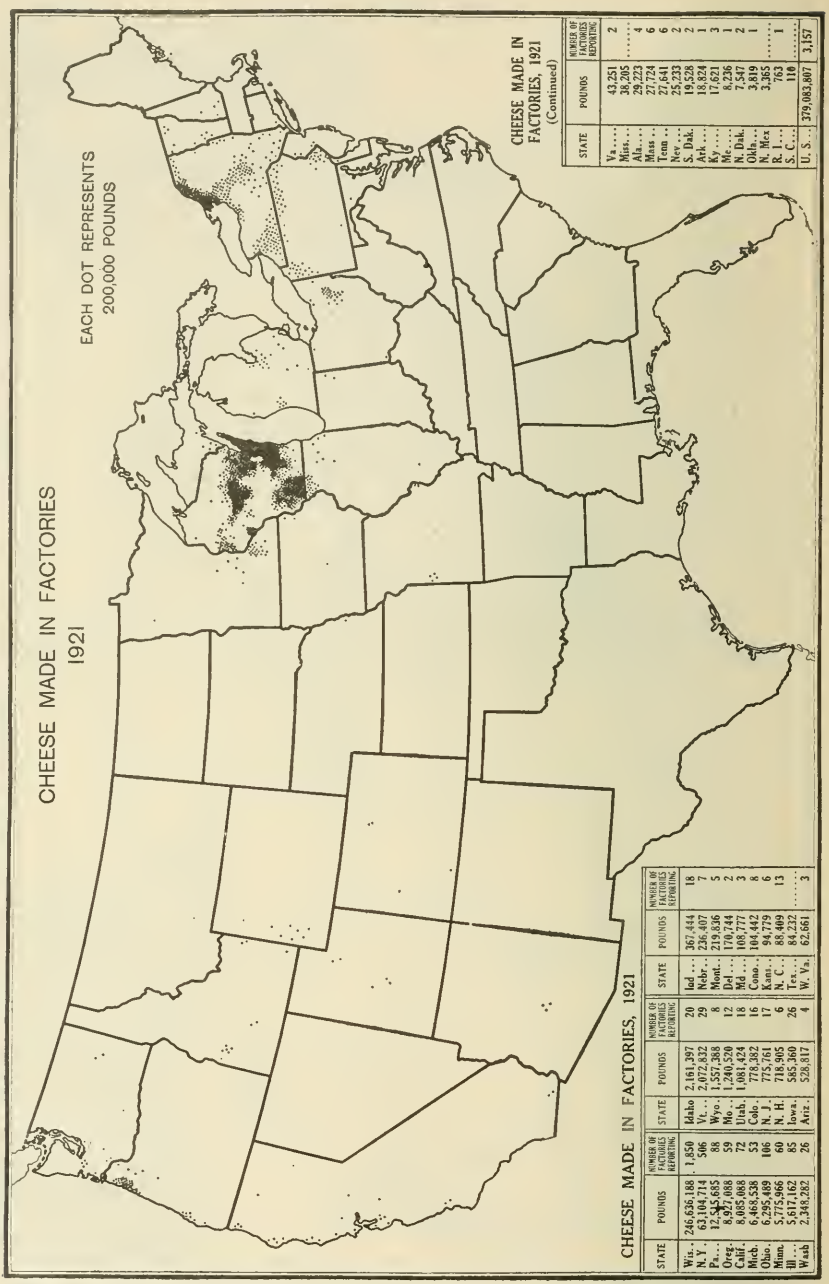
FIG. 86.—Butter made on farms in 1919 constituted 43 per cent of the total production of 1,646,171,874 pounds reported by the census. The areas of densest production of farm butter, it will be noted, are the Piedmont Plateau, extending from eastern Pennsylvania to Alabama; the Tennessee River Valley of northern Alabama and eastern Tennessee; the upper Ohio River basin; the western portion of Kentucky and Tennessee; and the northeastern portion of Texas. It is notable how little butter is made on farms in Wisconsin and Minnesota, where the factory system is well developed. Over half of the farms in the United States made butter in 1919, but less than one-third of the butter made was sold. Most of this farm butter sold was consumed in the locality where it was produced.



STATE	TOTAL POUNDS	NUMBER OF FACTORIES REPORTING
Ariz.	1,395,555	7
N. C.	1,263,895	10
Wyo.	1,249,961	13
Conn	1,155,586	19
Ala.	742,554	12
Nev.	719,772	16
Md.	607,455	11
Ark.	585,939	9
D. C.	561,684	1
W. Va	528,854	8
Del.	395,597	3
N. H	305,451	10
N. J.	179,544	12
La.	156,142	4
Ga.	93,038	2
S. C.	77,727	2
Fla.	17,224	2
N. Mex	28,969	1
U. S	1,037,933,244	3,434

STATE	TOTAL POUNDS	NUMBER OF FACTORIES REPORTING
Minn	149,522,170	702
Wis.	124,987,104	540
Iowa	106,118,310	361
Ohio	78,691,294	131
Calif	68,826,826	116
Nebr	66,663,475	49
Mich	51,790,190	170
Ill.	48,135,821	127
Ind.	47,490,196	86
Mo.	42,415,972	72
Kans.	36,397,299	64
Wash.	23,207,477	84
N. Y.	21,221,205	162
S. Dak	18,272,366	70
N. Dak	15,738,354	35
Oreg.	15,174,225	66
Vt.	14,795,867	86
Colo.	14,316,028	51
Pa.	14,125,592	143
Tex.	11,253,713	37
Ky.	10,742,738	14
Okla.	10,501,294	21
Tenn	8,223,254	30
Mont	7,106,363	43
Idaho	4,933,691	23
Utah	4,491,269	21
Miss.	4,343,194	15
Mass	3,895,019	43
Va.	2,726,086	23
Wyo.	2,350,198	7

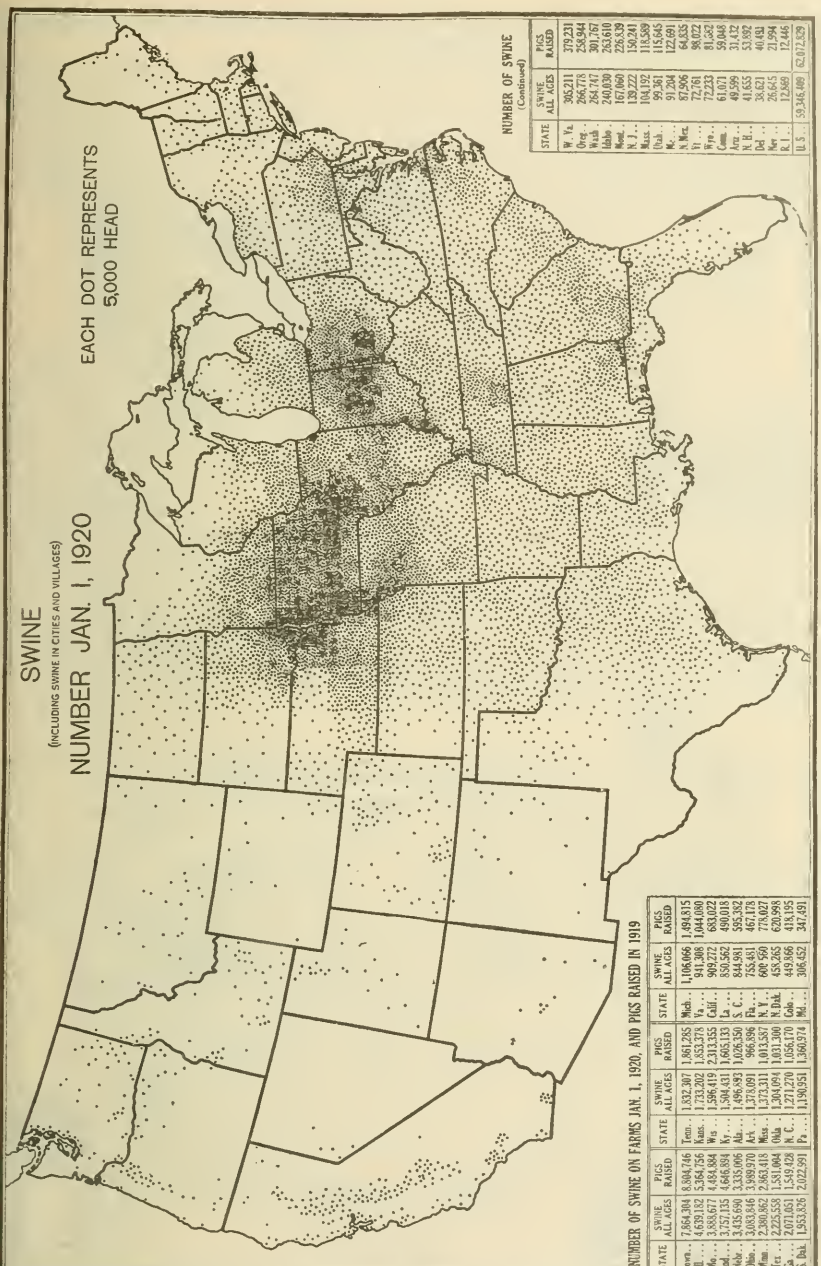
FIG. 87.—Most of the factory butter is made in the Hay and Pasture Region, especially the western portion, in the Corn Belt, and in the Pacific Coast Regions. The spotted character of the map, especially in the Corn Belt, indicates the concentration of butter making in a relatively few cities to which the cream or butter fat is shipped from the farms. Whereas only half as much butter was sold by the farmers of the United States in 1919 as in 1909, the amount of butter fat sold increased 74 per cent and of cream sold 50 per cent. The figures used in preparing this map were compiled from reports received by the Dairy and Poultry Division of the Bureau of Agricultural Economics. Returns received since the map was prepared increase the total for the United States to 1,055,000,000 pounds.



STATE	POUNDS	NUMBER OF FACTORIES REPORTING
Wis.	246,636,188	1,850
N. Y.	63,104,714	506
Pa.	12,345,655	88
Oreg.	8,085,988	59
Calif.	8,057,548	73
Mich.	6,468,538	53
Ohio	6,295,489	106
Minn.	5,775,966	60
Ill.	5,617,162	85
Wash.	2,348,282	26
Idaho	2,161,397	20
Vt.	2,072,832	29
Wyo.	1,557,388	8
Me.	1,340,520	12
Utah	1,161,744	2
Colo.	1,061,277	3
N. J.	775,761	16
N. H.	718,905	17
Iowa	585,360	6
Ariz.	528,817	26
Ind.	367,444	4
Nebr.	236,407	18
Mont.	219,036	7
Del.	169,744	5
Md.	168,277	2
Conn.	104,442	3
Kans.	94,729	8
N. C.	88,469	6
Tex.	84,232	13
W. Va.	62,661	3

STATE	POUNDS	NUMBER OF FACTORIES REPORTING
Va.	43,251	2
Miss.	38,205	
Ala.	29,223	4
Mass.	27,724	6
Tenn.	27,641	6
Nev.	25,233	2
S. Dak.	19,526	2
Ark.	18,824	1
Ky.	17,621	3
Md.	8,250	1
N. Dak.	7,540	2
Okla.	3,819	1
N. Mex.	3,365	
R. I.	763	1
S. C.	110	
U. S.	379,083,807	3,157

FIG. 88.—Practically all the cheese is now made in factories, only 6,000,000 pounds in 1919, or less than 2 per cent of the total production of the United States, being made on farms. About two-thirds of the cheese is made in Wisconsin and half of the remainder in New York. Cheese production has developed in those parts of Wisconsin and New York having less than 150 days in the growing season, except along the lake shores, and in the central, sandy portion of Wisconsin, which has poor pastures. The short, cool season favors summer pasture and cheese production, just as silage, winter dairying, butter making, skim milk, hogs, and corn complete the economic cycle in the warmer belt to the south. The figures were compiled from reports received by the Dairy and Poultry Division, Bureau of Agricultural Economics.



STATE	SWINE ALL AGES	PIGS RAISED
W. Va.	365,211	379,231
Oreg.	296,778	258,944
Wash.	284,747	301,787
Idaho	240,030	263,610
Nevada	157,660	159,209
N. J.	129,277	130,701
Mass.	104,192	115,589
Dist.	99,361	115,645
Md.	91,204	122,691
N. Mex.	87,506	64,835
Ariz.	72,761	98,022
Wyo.	72,233	81,582
Conn.	61,071	59,048
Ariz.	49,599	31,432
N. H.	41,655	53,992
Del.	35,621	46,934
Nev.	26,565	21,964
Ariz.	12,569	12,446
U. S.	59,346,489	62,071,829

STATE	SWINE ALL AGES	PIGS RAISED	STATE	SWINE ALL AGES	PIGS RAISED	STATE	SWINE ALL AGES	PIGS RAISED
Iowa	7,864,304	8,804,746	Tenn.	1,832,307	1,861,265	Mich.	1,106,066	1,494,515
Ill.	4,639,182	5,384,726	Kans.	1,733,202	1,653,378	Va.	941,308	1,044,080
Mo.	3,888,677	4,484,884	Wis.	1,596,419	2,113,355	Calif.	909,272	683,022
Ind.	3,757,135	4,646,894	Ky.	1,504,431	1,665,133	La.	830,562	490,018
Nebr.	3,435,690	3,335,096	Ala.	1,496,993	1,026,350	S. C.	844,981	595,382
Ohio	3,083,846	3,989,970	Ark.	1,373,091	966,596	Fla.	755,491	467,178
Minn.	2,360,862	2,963,418	Miss.	1,373,311	1,013,337	N. Y.	600,950	774,027
Tex.	2,225,538	1,581,664	Okla.	1,304,094	1,031,500	N. Dak.	436,265	620,998
Ga.	2,071,051	1,549,928	N. C.	1,271,270	1,056,170	Colo.	449,966	418,155
S. Dak.	1,953,926	2,022,591	Pa.	1,190,951	1,366,974	Mont.	306,432	347,491

FIG. 89.—Over two-fifths of the hogs and pigs in the United States are in the Corn Belt, nearly one-fifth are in the Cotton Belt, and nearly another fifth in the Corn and Winter Wheat Region. In 1919 there were, on the average, 106 swine per square mile in the Corn Belt, 27 in the Cotton Belt, 32 in the Corn and Winter Wheat Region, 17 in the Hay and Pasture Region, and about 4 per square mile in the remainder of the United States. Just as the cool Hay and Pasture Region finds the best outlet for its crops in feeding dairy cows, so the warm, rich Corn Belt finds the growing of corn and feeding of beef cattle and hogs its most profitable system of farming (see Figs. 27 and 81). Swine in cities and villages numbered 2,638,389, which is about 4 per cent of the total number in the United States.

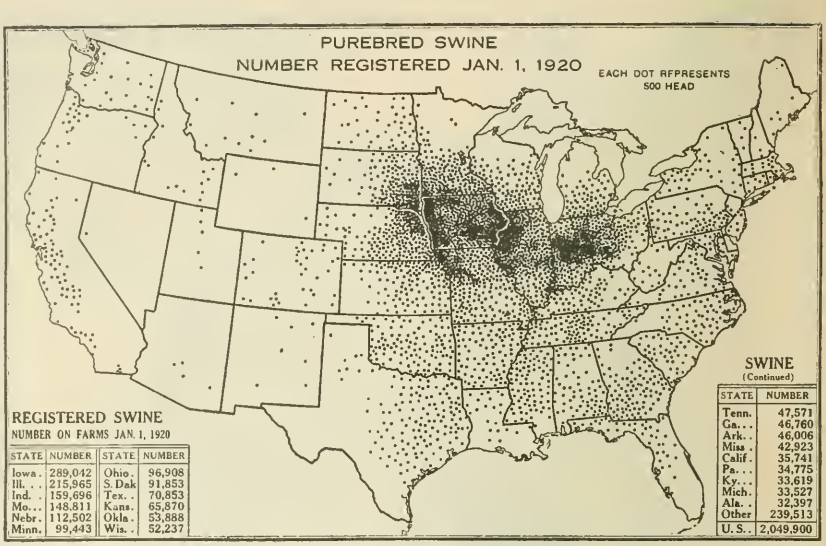


FIG. 90.—Nearly 60 per cent of the registered pure-bred hogs and pigs are in the Corn Belt. About one-seventh, as with pure-bred beef cattle, are in Iowa. Nearly 5 per cent of the swine in the Corn Belt are registered, and 3 per cent in the remainder of the United States. Duroc-Jersey hogs constitute 40 per cent of the registered swine in the United States, Poland-China 35 per cent, Chester-White 9 per cent, Hampshire 5 per cent, Berkshire 4 per cent, other breeds and unspecified 7 per cent. Iowa leads all States in number of pure-bred Duroc-Jersey, Poland-China, Chester-White, Hampshire and Tamworth; Indiana in number of spotted Poland-China; Pennsylvania in Berkshires; Kansas in Essex; and Minnesota in Yorkshires.

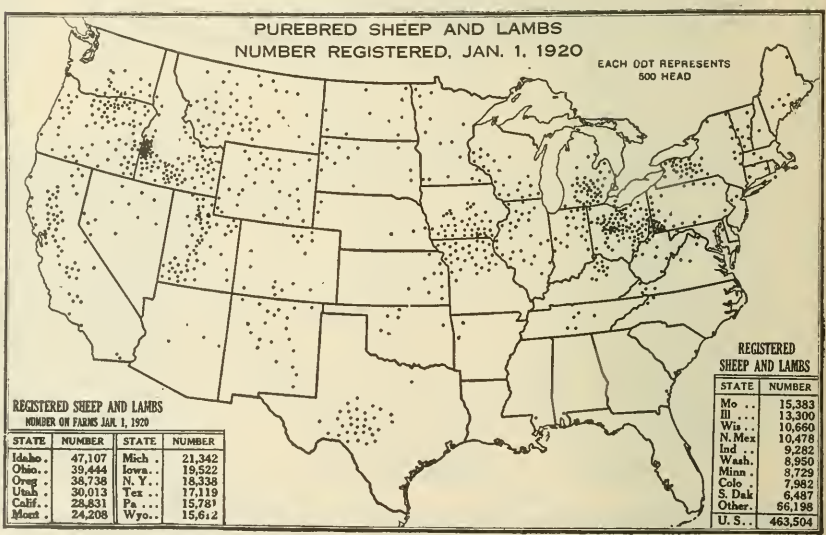
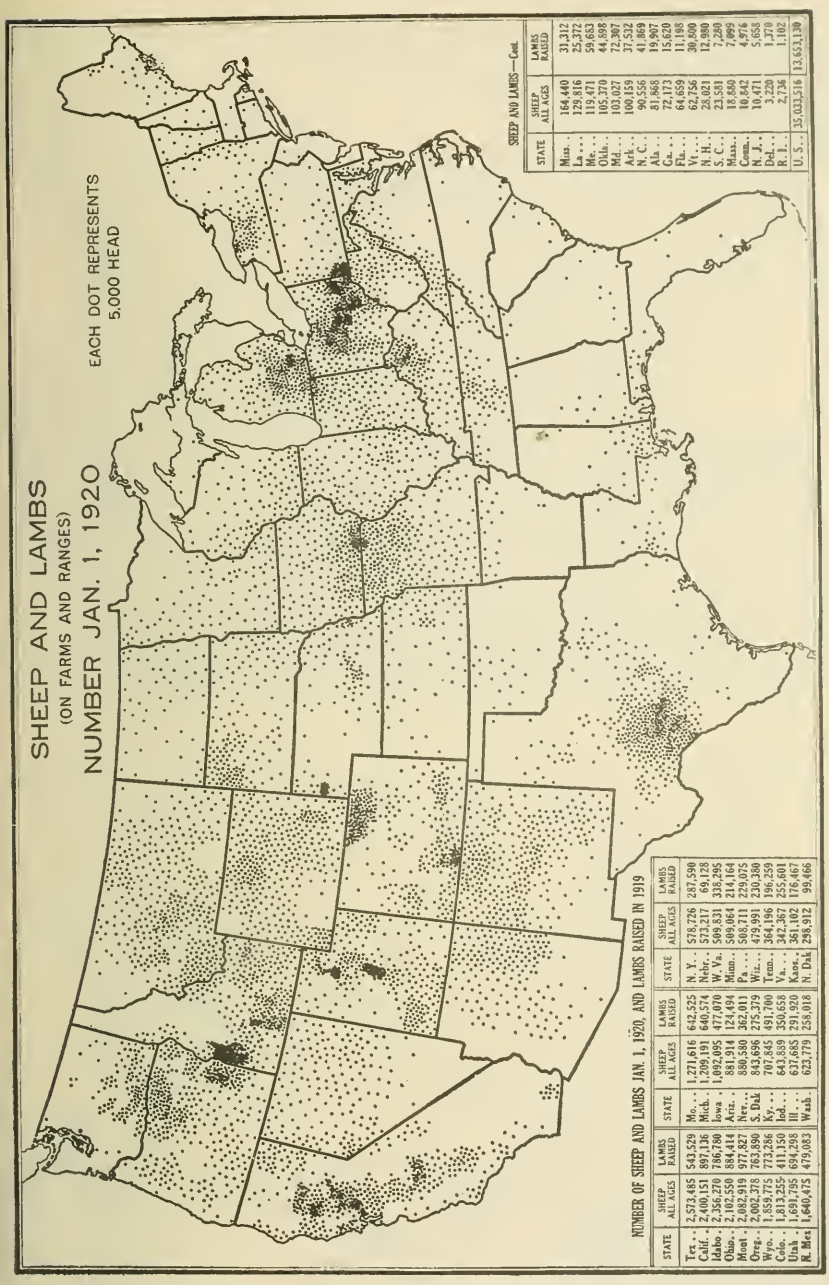


FIG. 91.—Registered pure-bred sheep and lambs are more evenly diffused geographically than pure-bred cattle or swine. A few breeders remain in the old centers of production in Vermont and New York; many more pure-bred sheep may be noted in the more recent production areas of Ohio, southwestern Pennsylvania and southern Michigan; but the greatest number is now found in the West, Idaho leading the States with nearly 50,000 registered animals. Shropshires constitute 27 per cent of all registered sheep in the United States, Rombouillet 23 per cent, Merino 14 per cent, Hampshire 11 per cent, other breeds and unspecified 25 per cent. The Cotton Belt is the only region in which there are practically no pure-bred sheep.



STATE	SHEEP ALL AGES	LAMBS RAISED
Mont.	2,573,485	543,529
Calif.	2,400,151	897,136
Idaho	2,356,270	786,780
Ohio	2,102,550	884,414
Mont	2,082,919	977,827
Oreg.	2,002,378	763,890
Wyo.	1,858,775	773,286
Colo.	1,813,255	611,150
Utah	1,691,795	694,298
N. Mex.	1,640,475	475,083
Mo.	1,221,616	642,525
Mich.	1,209,191	640,574
Iowa	1,092,095	477,070
Ariz.	881,914	124,494
Nev.	880,580	362,011
S. Dak	843,696	275,379
Ky.	707,845	491,700
Ind.	643,889	350,658
Ill.	637,685	291,920
Wash.	623,779	258,018
N. Y.	578,726	287,590
Nebr.	573,217	69,128
W. Va.	509,831	338,295
Minn.	509,064	214,164
Pa.	508,711	229,075
Wis.	479,991	230,380
Tenn.	364,196	196,259
Va.	342,367	255,601
Kans.	361,102	176,467
N. Dak	258,912	99,466

STATE	SHEEP ALL AGES	LAMBS RAISED
Miss.	164,440	31,312
La.	129,816	25,372
Me.	119,471	59,653
Okla.	105,370	44,898
Md.	103,027	72,307
Ark.	100,159	37,532
N. C.	90,556	41,869
Ala.	81,868	19,907
Ga.	72,173	15,620
Fla.	64,659	11,185
Tex.	62,705	30,198
N. H.	24,401	12,980
S. C.	23,581	7,220
Mass.	18,850	7,099
Conn.	10,542	4,976
N. J.	10,471	5,658
Del.	3,220	1,370
R. I.	2,736	1,102
U. S.	35,033,516	13,653,130

FIG. 92.—Over 60 per cent of the sheep and lambs are in the western half of the United States, largely because sheep can graze on more arid lands than any other kind of domesticated animal, and also are less subject to disease in arid than in humid climates. The dense spots shown in the West are owing in part to the date of enumeration, January 1, when many sheep are being fed in the irrigated districts, and in part of the enumeration of sheep in that county in which the owner resides, even though the bands of sheep be roaming over distant deserts. The following summer the same sheep may graze on the alpine meadows of the national forests an hundred miles or more away. The dense centers in the East, however, represent sheep on farms within the counties indicated.

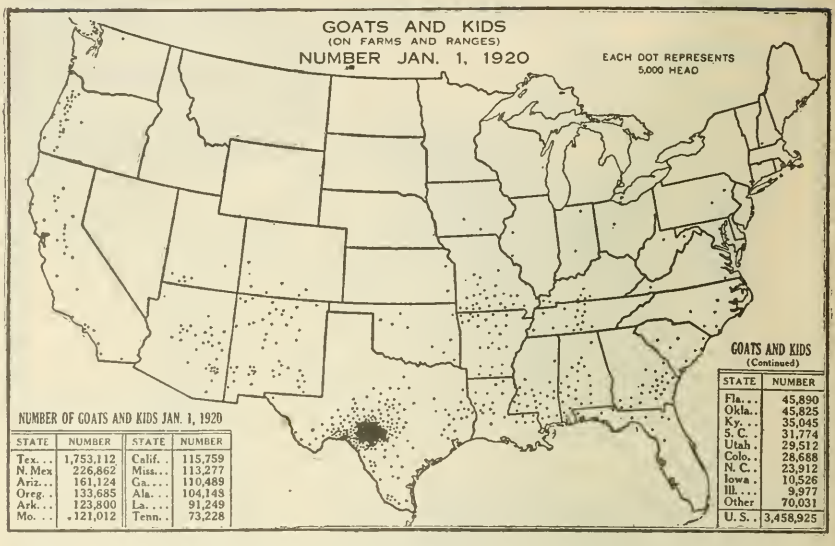


FIG. 93.—Over half of the goats in the United States are in Texas—nearly all on the Edwards Plateau. Cattle, sheep, and goats (see Figs. 81 and 92) are grazed on the same land in this district, the cattle pasturing on the grass, the goats browsing the oak scrub and other brush, retarding its advance upon the grass land, while the sheep eat the weeds as well as the grass and brush. In the South and in western Oregon the goats are used in large numbers in clearing up cut-over land. In Texas and Oregon the goats are mostly Angoras, in Arizona and New Mexico Angoras predominate, but other breeds are common, while in the South practically none of the goats are raised for their fleece.

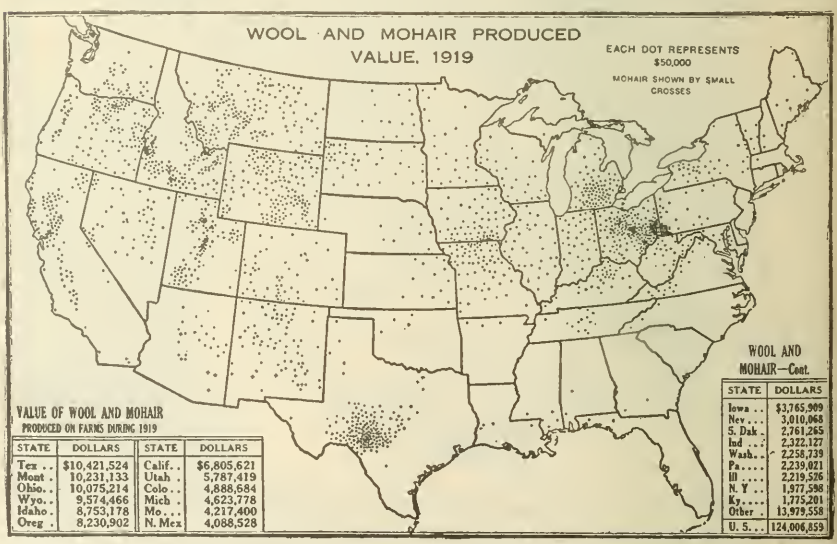
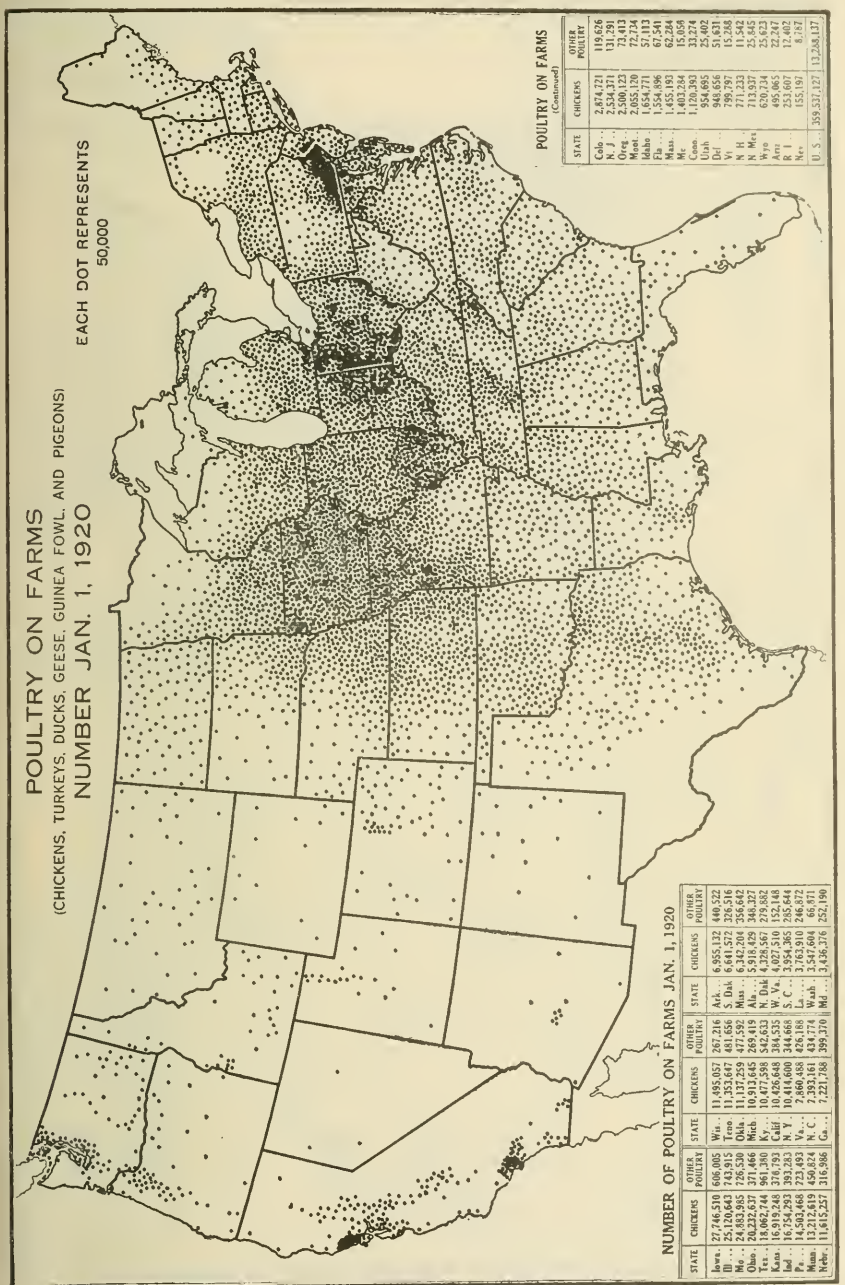


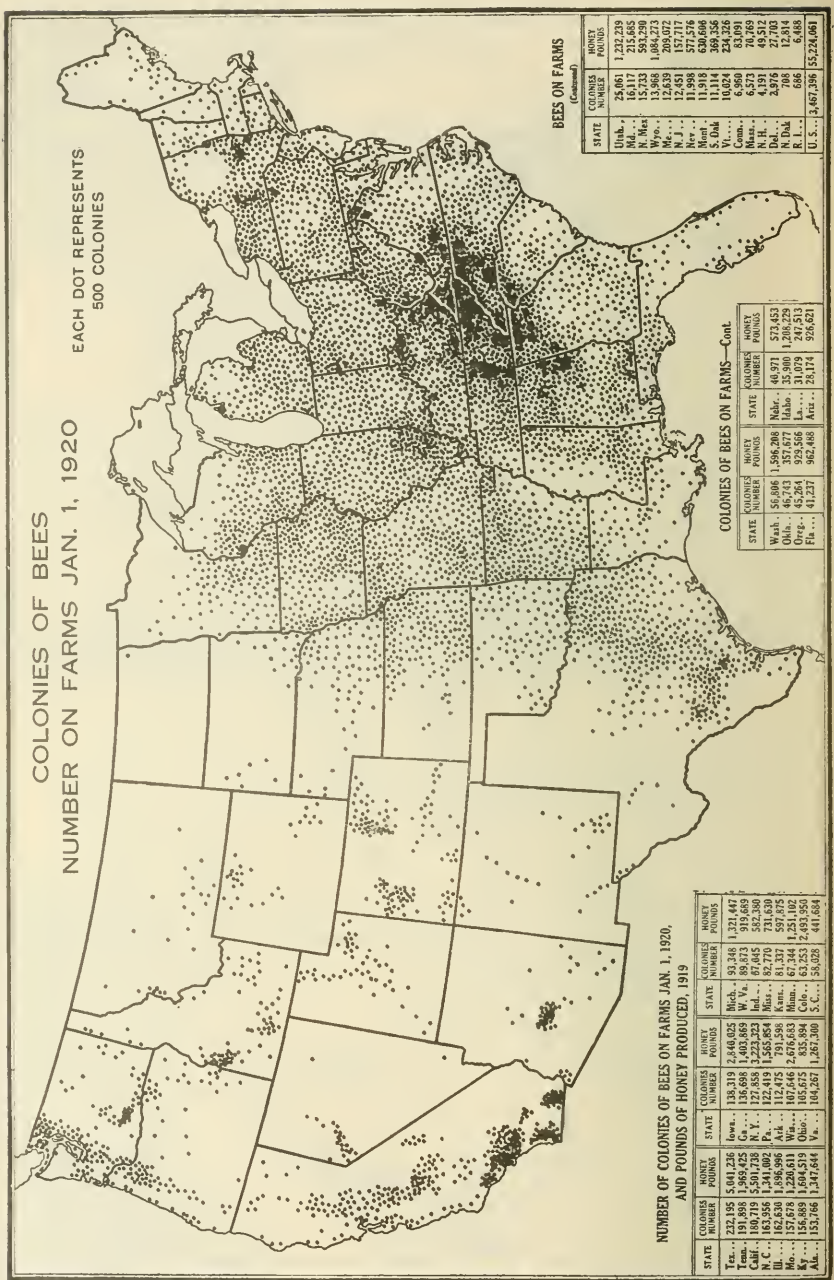
FIG. 94.—The farm value of the wool produced in the United States in 1919 was about 120 million dollars, and of the mohair about three and a half million. Texas led the States in value of wool and mohair produced, but as the value of the mohair amounted to $2,673,275, the value of the wool produced in Texas was less than in Montana, Ohio, Wyoming, Idaho, or Oregon. The average value of the wool produced in 1919 per mature sheep January 1, 1920, was $6.43 in Ohio, $6.50 in Montana, $5.53 in Oregon, and about $4 in Texas; while the value of mohair in Texas per mature goat raised for the fleece was $2.40. The price of wool in 1919 was about three times the pre-war price.



STATE	CHICKENS	OTHER POULTRY
Iowa	27,746,510	606,005
Ill.	25,120,643	743,915
Mo.	24,883,985	726,530
Ohio	20,222,637	371,466
Ind.	18,913,248	374,793
Kans.	16,754,293	393,283
Pa.	14,503,468	723,493
Minn.	13,212,619	450,824
Nebr.	11,615,257	315,986
Wis.	11,495,057	267,216
Tenn.	11,353,647	481,656
Okla.	11,137,259	477,592
Mich.	10,913,645	289,419
Ky.	10,477,573	346,533
Calif.	10,426,848	384,532
N. Y.	10,414,600	344,668
Va.	7,860,488	426,188
N. C.	7,393,161	434,774
Ga.	7,221,788	399,370
Ark.	6,955,132	440,522
S. Dak.	6,641,572	326,516
Miss.	6,342,204	356,642
Ala.	5,918,429	346,327
Texas	5,565,652	298,852
W. Va.	4,027,510	152,148
S. C.	3,954,365	285,644
La.	3,763,910	246,872
Wash.	3,547,604	66,671
Md.	3,436,376	252,190

STATE	CHICKENS	OTHER POULTRY
Colo.	2,874,721	119,626
N. J.	2,504,221	73,791
Oreg.	2,060,123	71,411
Mont.	2,055,120	72,234
Idaho	1,654,771	57,113
Fla.	1,554,896	67,541
Mass.	1,455,193	62,284
Me.	1,403,284	35,656
Conn.	1,120,363	33,224
Utah	954,695	25,402
Del.	940,656	51,631
Vt.	799,797	15,288
N. H.	771,233	11,542
N. Mex.	710,937	25,845
Nev.	630,514	47,253
Wyo.	495,065	22,747
R. I.	253,607	12,402
Ariz.	155,197	8,787
U. S.	359,537,127	13,268,137

FIG. 95.—Half of the poultry in the United States are in the Corn Belt and around its margin, where feed is cheap. But the two most notable districts of production are the counties in southeastern Pennsylvania, near Philadelphia, and Sonoma County, Calif., especially the district around Petaluma. Six counties in southeastern Pennsylvania had nearly 5 million poultry on January 1, 1920, or 4,000 to the square mile; while in Sonoma County there were over 3 million poultry, with sales of eggs and chickens amounting to over 12 million dollars in 1919. Los Angeles County, Calif., had 1,350,000 poultry. The California cities are supplied largely from these two counties; but the eastern cities draw their supplies from a much wider territory.

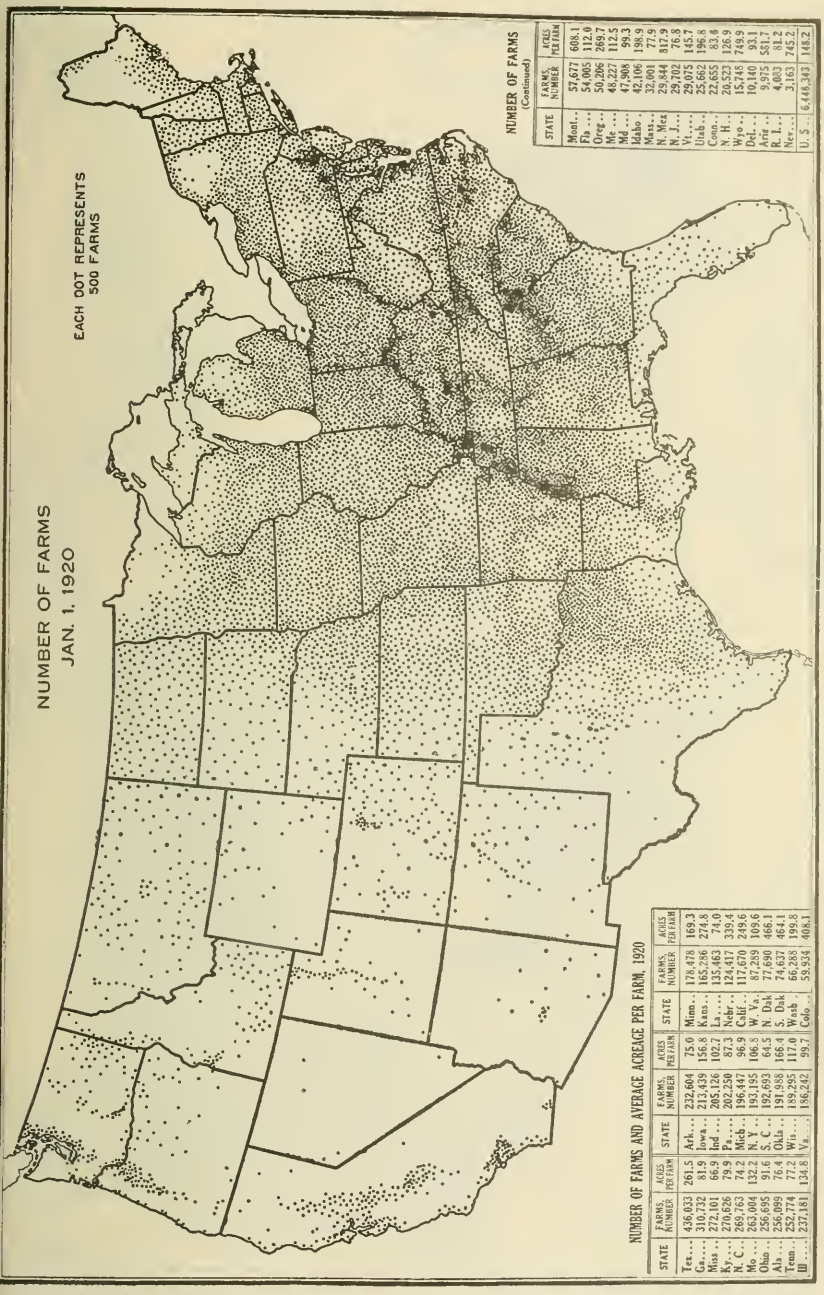


STATE	COLONIES NUMBER	HONEY POUNDS
Utah..	25,061	1,232,239
Md....	16,117	215,685
N. Mex.	15,733	593,290
Wyo...	13,968	1,084,273
Me....	12,639	209,072
N. J...	12,451	157,717
Nev...	11,998	577,576
R. I...	11,510	670,868
S. Dak.	11,111	369,356
Vt....	10,024	224,326
Conn..	6,960	83,091
Mass..	6,573	70,769
N. H..	4,191	49,512
Del....	2,976	27,193
Alaska.	2,132	72,150
R. Isl.	686	6,488
U. S...	3,467,396	55,224,661

STATE	COLONIES NUMBER	HONEY POUNDS
Wash..	56,806	1,596,206
Wis....	45,772	1,400,577
Oreg...	45,261	929,566
Fla....	41,237	962,488
Nebr..	40,971	573,453
Idaho..	35,520	1,705,752
La....	31,079	247,513
Ariz...	28,174	926,621

STATE	COLONIES NUMBER	HONEY POUNDS
Tex....	232,195	5,041,236
Tenn..	191,898	3,965,425
Calif..	180,719	5,501,738
N.C....	163,356	1,341,002
Ill....	162,630	1,986,996
Mo....	157,676	1,226,611
Ky....	156,989	1,904,519
Ala....	153,768	1,347,644
Iowa..	138,319	2,648,035
Ga....	136,698	1,403,869
N. Y...	127,858	1,223,223
Pa....	122,419	1,565,854
Ark...	112,475	791,598
Wash..	107,646	2,676,683
Ohio..	105,575	835,894
Va....	104,267	1,267,300
Mich..	93,316	1,321,447
W. Va..	89,373	1,695,657
Ind...	67,845	582,360
Miss..	82,770	731,630
Kans..	81,337	597,875
Minn..	67,344	1,251,102
Colo..	63,253	2,493,593
S.C....	56,328	441,884

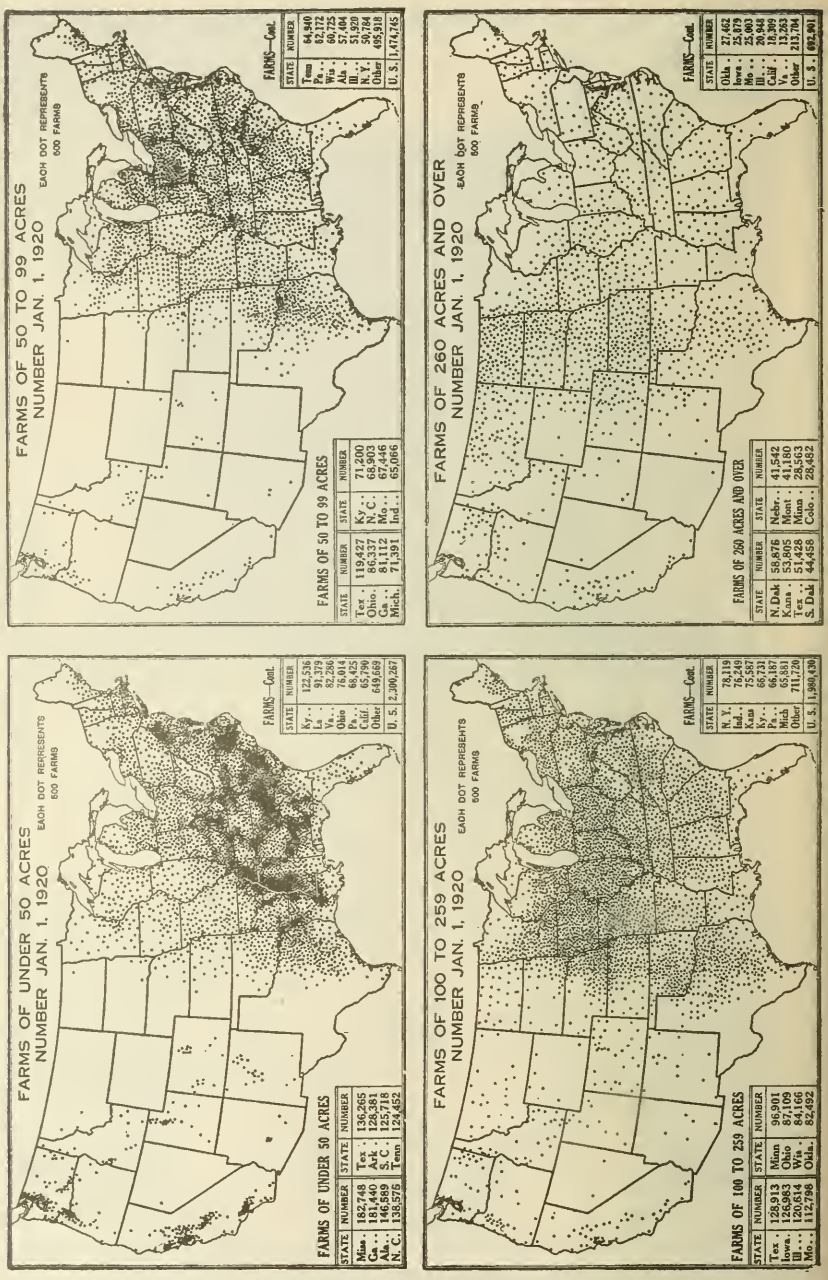
Fig. 96.—Two areas of dense distribution of bees stand out on the map, the southern Appalachians and southern California. The southern Appalachian area, extending from eastern Kentucky to northern Georgia and Alabama, had about 600,000 colonies in 1919 and produced about 7,000,000 pounds of honey; whereas California, with only 181,000 colonies, produced 5,500,000 pounds, or almost three times as much per colony. Texas also produced over 5,000,000 pounds of honey in 1919. The irrigated districts in the West, where fruit and alfalfa furnish many flowers, show distinctly on the map. Districts having large numbers of bees may also be noted in New York State, along the Ohio River, and in southern Illinois.



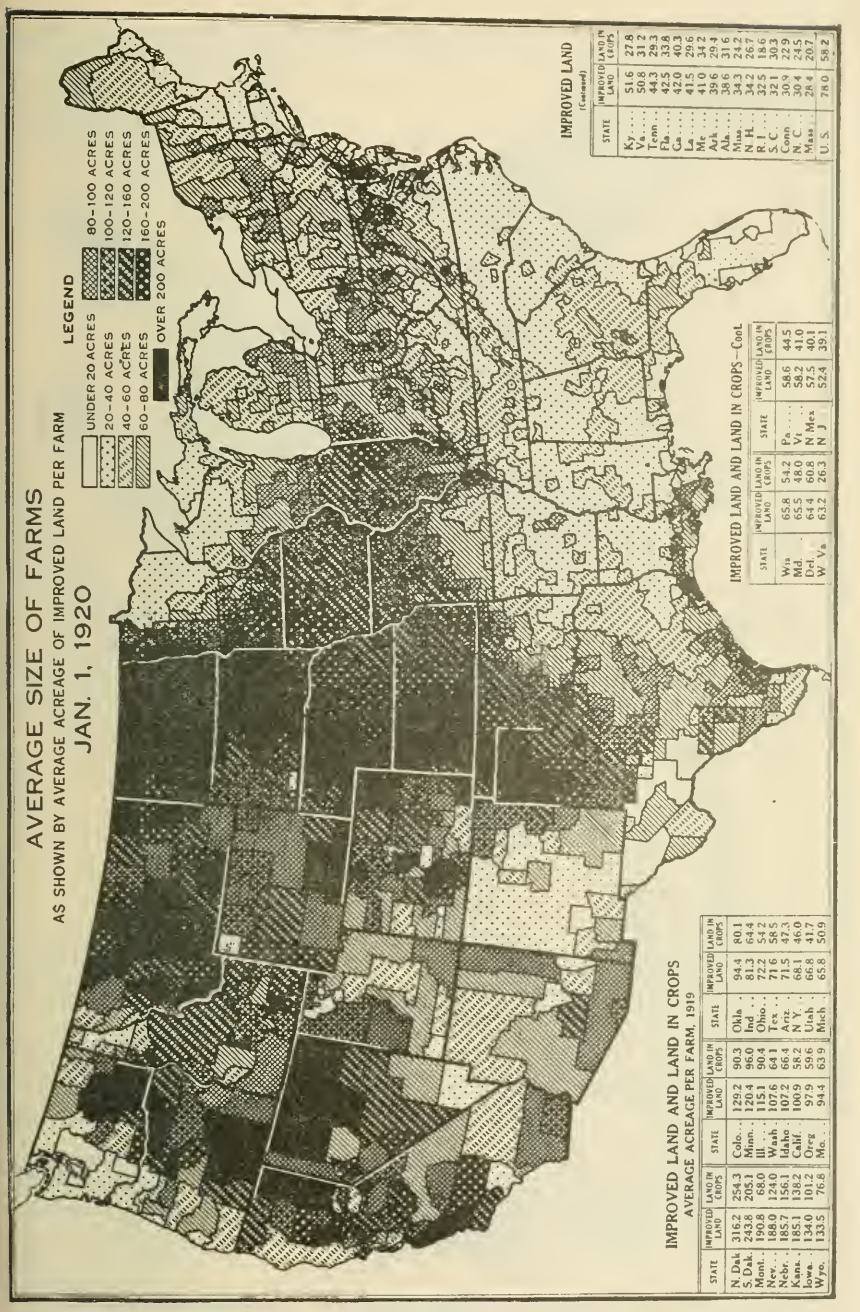
STATE	FARMS, NUMBER	ACRES PER FARM	STATE	FARMS, NUMBER	ACRES PER FARM	STATE	FARMS, NUMBER	ACRES PER FARM
Tex.	436,033	261.5	Ark.	232,604	75.0	Minn.	176,478	169.3
Ga.	310,732	81.9	Iowa	213,439	156.8	Kans.	165,236	274.8
Miss.	272,101	66.9	Ind.	205,126	102.7	La.	135,463	74.0
Ky.	270,626	79.9	Pa.	202,250	87.3	Nebr.	124,417	339.4
N. C.	269,763	74.2	Mich.	196,447	96.9	Calif.	117,670	249.6
Mo.	263,004	132.2	N. Y.	193,195	106.8	W. Va.	87,289	109.6
Ohio	256,695	91.6	S. C.	192,693	64.5	N. Dak.	77,690	466.1
Ala.	256,099	76.4	Okla.	191,988	166.4	S. Dak.	74,627	464.1
Tenn.	252,774	77.2	Wis.	189,255	117.0	Wash.	66,288	199.8
Ill.	237,161	134.8	Va.	186,242	99.7	Colo.	55,934	406.1

STATE	FARMS, NUMBER	ACRES PER FARM
Mont.	57,677	608.1
Fla.	54,005	112.0
Oreg.	50,206	269.7
Me.	48,227	112.5
Md.	47,508	99.3
Idaho	42,106	196.9
Mass.	37,001	77.9
N. Mex.	29,844	817.9
N. J.	29,702	76.8
Vt.	29,075	145.7
Utah	25,662	196.8
Conn.	22,655	83.6
N. H.	20,523	126.9
Wyo.	15,748	749.9
Del.	10,140	93.1
Ariz.	9,975	581.7
R. I.	6,663	51.2
Nev.	3,463	745.2
U. S.	6,448,343	148.2

Fig. 97.—This map, showing the distribution of farms, might also serve as a map of farm population. The densest areas are southeastern Pennsylvania, the upper Piedmont of South Carolina and Georgia, eastern, central, and western Tennessee, the Ohio Valley, and the Yazoo Delta in Mississippi. Over half the farms in the United States are in the Cotton Belt and the Corn and Winter Wheat Region. Many of the tenant farms on the plantations in the Cotton Belt, however, are little more than laborers' allotments. The Corn Belt, although it includes over one-third the value of farm property in the United States, has only one-seventh of the farms. Nine-tenths of the farms are in the eastern half of the United States. The relative density of farm population in the South is even greater than that of farms. (See Figs. 104 and 118.)

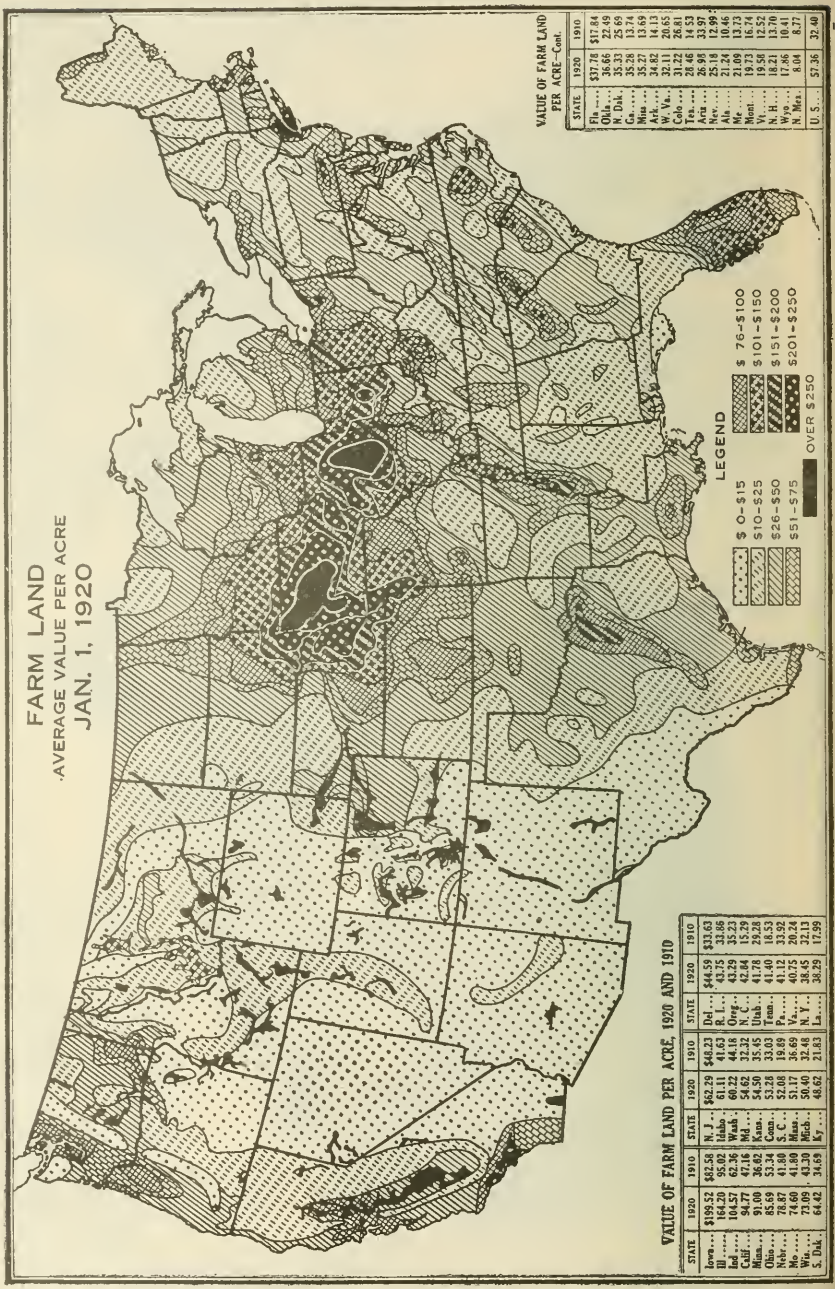


FIGS. 98 to 101.—The typical negro tenant farms are from 30 to 50 acres in size, of which about half is in cotton. Many white farmers also have small farms, both in the Cotton Belt and in the Corn and Winter Wheat Region. Farms of 50 to 100 acres are characteristic of the white cotton farmers in the upper Piedmont of the Carolinas and Georgia and the Black Prairie of Texas; also of the fair to good soils of Tennessee, Kentucky, Ohio, and Michigan. On the richer lands of the Corn Belt farms of 100 to 260 acres prevail. Large farms in area—over 260 acres—are found in the Great Plains and Spring Wheat regions. A two-section "dry farm" in the Great Plains Region, however, is no larger in productivity than a quarter-section farm in the Corn Belt (see Fig. 103).



STATE	IMPROVED LAND	LAND IN CROPS
N. Dak.	316.2	254.3
S. Dak.	243.8	205.1
Mont.	190.8	68.0
Nev.	188.0	124.0
Nebr.	185.7	156.1
Kans.	183.1	138.2
Wyo.	134.0	10.7
Wyo.	133.5	76.8
Colo.	129.2	90.3
Minn.	120.4	96.0
Ill.	115.1	90.4
Wash.	107.6	64.1
Idaho	107.2	66.4
Calif.	100.9	58.2
Oreg.	100.3	53.9
Mo.	94.4	63.9
Okla.	94.4	80.1
Ind.	81.3	64.4
Ohio	72.2	54.2
Tex.	71.6	58.5
Ariz.	71.5	47.3
N. Y.	68.1	46.0
Utah	66.8	41.7
Mich.	65.8	50.9
Wis.	65.8	54.2
Md.	65.5	48.0
Del.	64.4	60.8
W. Va.	63.2	26.3
Pa.	58.6	44.5
Vt.	58.2	41.0
N. Mex.	57.5	40.1
N. J.	52.4	39.1
Ky.	51.6	27.8
Va.	50.8	29.2
Tenn.	44.3	29.3
Fla.	42.5	33.8
Ga.	42.0	40.3
La.	41.5	29.6
Me.	41.0	34.2
Ark.	39.6	29.4
Ala.	38.6	21.6
Miss.	34.3	26.7
N. H.	34.2	26.7
R. I.	32.5	18.6
S. C.	32.1	30.3
Conn.	30.9	22.9
N. C.	30.4	24.5
Mass.	28.4	20.7
U. S.	78.0	58.2

FIG. 102.—Improved land is a better criterion of the real size of a farm than its total area. The Cotton Belt stands out clearly, with the farms in most of the area averaging less than 40 acres. The same small acreage per farm is found in eastern New England, where trucking and dairying dominate, and in the upper Lakes area, where farms are only partially reclaimed from the forest. At the other extreme, much of the Great Plains and most of the Spring Wheat Area average over 200 acres per farm. The sharp gradation zone extending from northwestern Minnesota to Indiana, thence to central Texas, marks the eastern margin of the prairies (see Fig. 7). Prairie farms were more easily and quickly made than forest farms, and have remained larger. (See Fig. 111.)



STATE	1920	1910	STATE	1920	1910	STATE	1920	1910
Iowa	$199.32	$85.58	N. J.	$62.29	$40.23	Del.	$44.59	$33.63
Ill.	184.20	62.72	Idaho	60.22	44.18	R. I.	43.75	32.65
Ind.	104.53	47.16	Wash.	60.22	44.18	Ore.	43.29	35.23
Calif.	94.77	47.16	Md.	54.62	32.32	N. C.	42.84	15.29
Miss.	91.00	36.62	Kans.	54.50	35.45	Utah	41.78	29.28
Ohio	85.69	53.34	Conn.	53.28	33.03	Tenn.	41.40	18.53
Nebr.	78.87	41.80	S. C.	52.08	19.89	Pa.	41.12	33.92
Mo.	74.60	41.80	Mass.	51.17	36.69	Va.	40.75	20.24
Wis.	71.09	41.39	Mich.	48.45	32.48	N. Y.	40.45	30.11
S. Dak.	64.42	34.69	Ky.	48.02	21.83	La.	38.29	17.99

STATE	1920	1910
Fla.	$37.78	$17.84
Okla.	36.66	22.49
N. Dak.	35.33	25.89
Ga.	35.28	13.74
Minn.	35.27	13.69
Ark.	34.82	14.13
W. Va.	32.11	28.65
Colo.	31.22	26.51
Tex.	28.46	14.53
Ariz.	26.98	33.97
Nev.	25.18	12.99
Ala.	21.24	10.46
Me.	21.09	13.73
Wash.	19.73	15.24
Vt.	19.58	12.52
N. H.	18.21	13.70
Wyo.	17.86	10.41
N. Mex.	8.04	8.77
U. S.	57.36	32.40

FIG. 103.—The Corn Belt is conspicuous on this map, average land values in central Illinois and northwestern Iowa having risen to over $250 an acre in 1919. There has been a decline since. The irrigated areas are also shown on the map as having land values of over $250, but this is not true of all the districts. Even the larger irrigated areas were too small to show other than in black, and many smaller districts could not be shown at all. The regions of low land values are the arid and semiarid lands of the West, the sandy, thin, or stony soils of the upper Lakes area and the North Atlantic States, and the light or leached lands in parts of the South, where also much of the farm may be in forest. The first box in the legend should read $0–$10, the second box $11–$25.

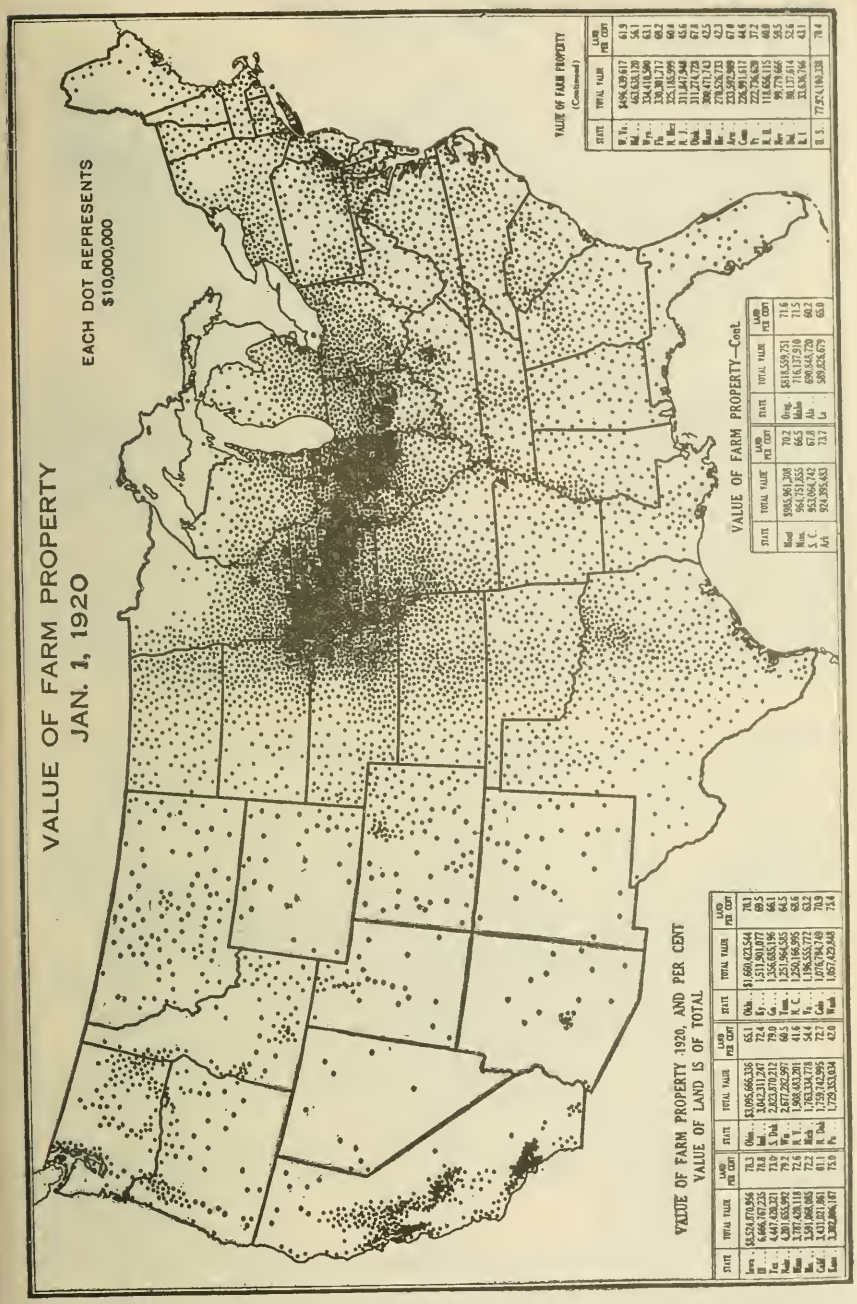
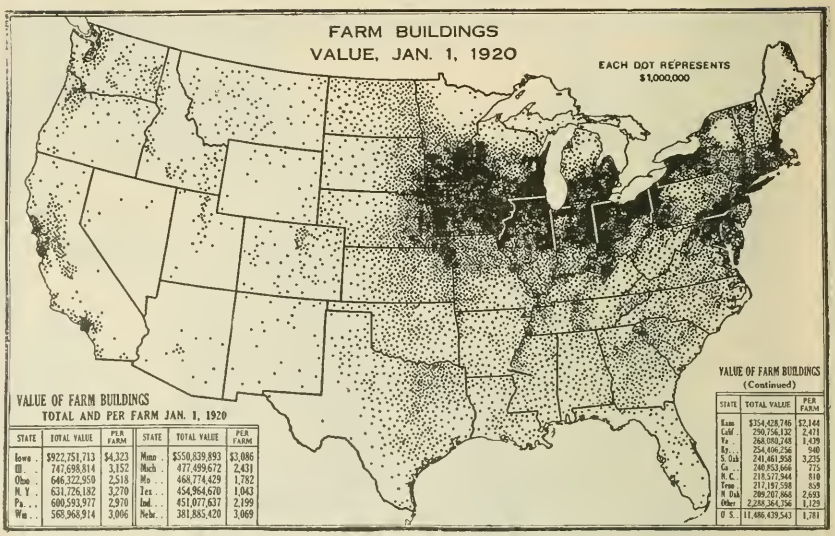


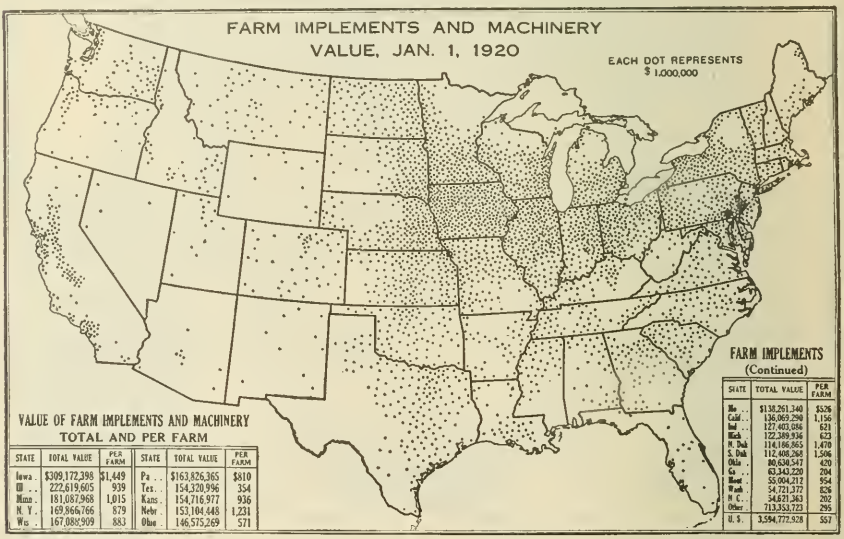
FIG. 104.—Over one-third of the value of farm property in the United States is in the Corn Belt, and nearly two-fifths of the value of farm land. The average value of farm land per acre January 1, 1920, was $148 in the Corn Belt, as compared with $40 in the Cotton Belt, $48 in the Hay and Pasture Region, and $21 in the Great Plains Region. Only in the South Pacific Coast Region does the value of farm property per square mile and of farm land per acre ($114) approach the values in the Corn Belt. Note the districts of greater values adjoining New York City, Philadelphia, Detroit, and the Twin Cities, also the Blue Grass district in Kentucky.



STATE	TOTAL VALUE	PER FARM	STATE	TOTAL VALUE	PER FARM
Iowa	$922,751,713	$4,323	Minn.	$550,839,893	$3,086
Ill.	747,698,814	3,152	Mich.	477,499,672	2,431
Ohio	646,322,950	2,518	Mo.	468,774,429	1,782
N. Y.	631,726,182	3,270	Tex.	454,964,670	1,043
Pa.	600,593,977	2,970	Ind.	451,077,637	2,199
Wis.	568,968,914	3,066	Nebr.	381,885,420	3,069

STATE	TOTAL VALUE	PER FARM
Kans.	$354,428,746	$2,144
Calif.	290,756,132	2,471
Va.	268,090,248	1,439
Ky.	254,406,256	940
S. Dak.	241,461,958	3,235
Ga.	240,953,666	775
N. C.	218,577,944	810
Tenn.	212,182,598	858
N. Dak.	209,207,868	2,693
Other	2,288,364,296	1,129
U. S.	11,486,439,543	1,781

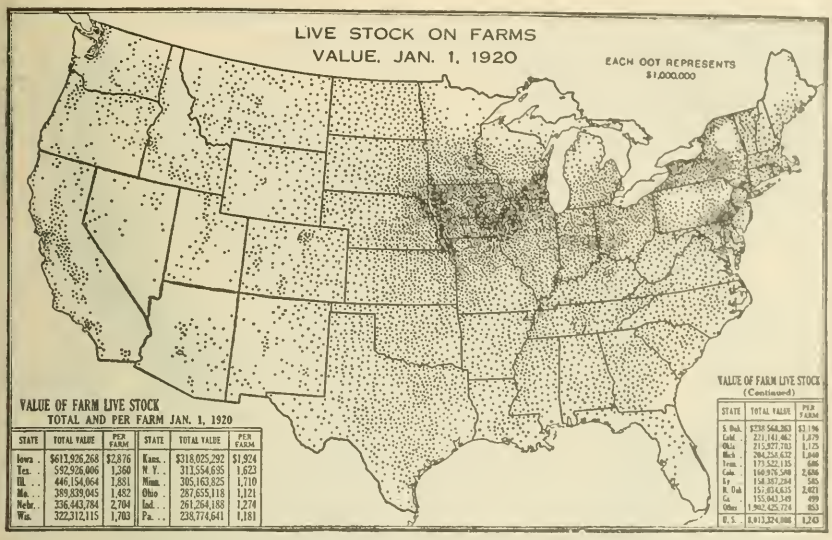
FIG. 105.—The value of farm buildings is greatest in southeastern Pennsylvania, where it exceeds the value of the land, and averages $4,000 to $5,000 per farm. In the Corn Belt the average value of farm buildings is $3,400 per farm, and it is almost as much in the Spring Wheat Area, and the southern portion of the Hay and Pasture Region. In the Cotton Belt, on the other hand, the average value is only $738, owing in part to the large number of negro shanties. However, the value of the buildings on the landlord's farm in a plantation is almost as great as the values in the Corn Belt. These values of farm buildings include barns and outbuildings, and since the value of the house is, in general, about half that of all farm buildings, the average value of farm houses in the United States is only about $900.



STATE	TOTAL VALUE	PER FARM	STATE	TOTAL VALUE	PER FARM
Iowa	$309,177,398	$1,449	Pa.	$163,826,365	$810
Ill.	222,619,605	939	Tex.	154,320,996	354
Minn.	181,087,968	1,015	Kans.	154,716,977	936
N. Y.	169,366,766	879	Nebr.	153,104,448	1,231
Wis.	167,088,909	883	Ohio	146,575,269	571

STATE	TOTAL VALUE	PER FARM
Mo.	$138,261,340	826
Calif.	136,069,290	1,156
Ind.	127,403,086	621
Mich.	122,389,936	623
N. Dak.	114,186,865	1,470
S. Dak.	112,408,268	1,506
Okla.	80,638,547	429
Ga.	63,343,220	204
Kent.	55,004,212	954
Wash.	54,721,377	826
N. C.	54,621,363	202
Other	713,353,723	295
U. S.	3,594,777,928	557

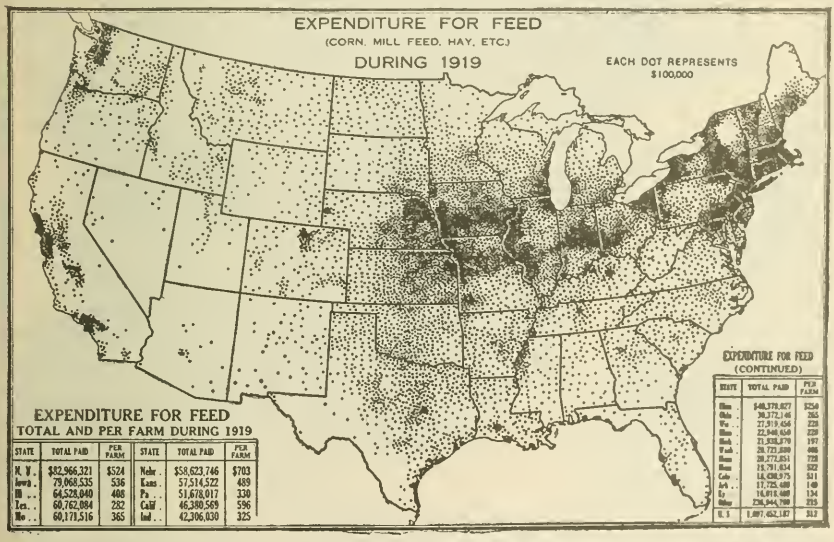
FIG. 106.—About one-half of the value of farm implements and machinery in the United States was reported in 1920 from the Corn Belt and the Hay and Pasture Region; but the greatest value per farm ($1,370) was in the Spring Wheat Area. In the general farming districts of the North and West the average farm had about $1,000 worth of machinery in 1920, but the much smaller amount per farm in the Cotton Belt ($215), and in the Corn and Winter Wheat Region ($400), reduced the Nation's average to $557. The proportion which the value of machinery and implements constituted of the total value of farm property was extraordinarily uniform, ranging around 4 to 5 per cent in all the regions, except in the Hay and Pasture Region, where it constituted 7 per cent.



STATE	TOTAL VALUE	PER FARM	STATE	TOTAL VALUE	PER FARM
Iowa	$612,926,268	$2,876	Kans.	$318,025,292	$1,924
Tex.	592,926,806	1,260	N. Y.	312,554,635	1,623
Ill.	446,154,064	1,881	Minn.	305,163,825	1,710
Mo.	389,839,045	1,482	Ohio	287,655,118	1,121
Nebr.	336,443,784	2,704	Ind.	261,264,188	1,274
Wis.	322,312,115	1,703	Pa.	238,774,641	1,181

STATE	TOTAL VALUE	PER FARM
S. Dak.	$230,564,263	$2,196
Colo.	221,141,462	1,879
Okla.	215,977,703	1,175
Mich.	204,245,632	1,040
Tenn.	173,522,135	686
Calif.	160,976,548	2,656
Ky.	154,357,284	585
N. Dak.	151,434,635	2,021
Ga.	135,943,349	499
Other	1,962,425,774	853
U. S.	8,013,324,886	1,240

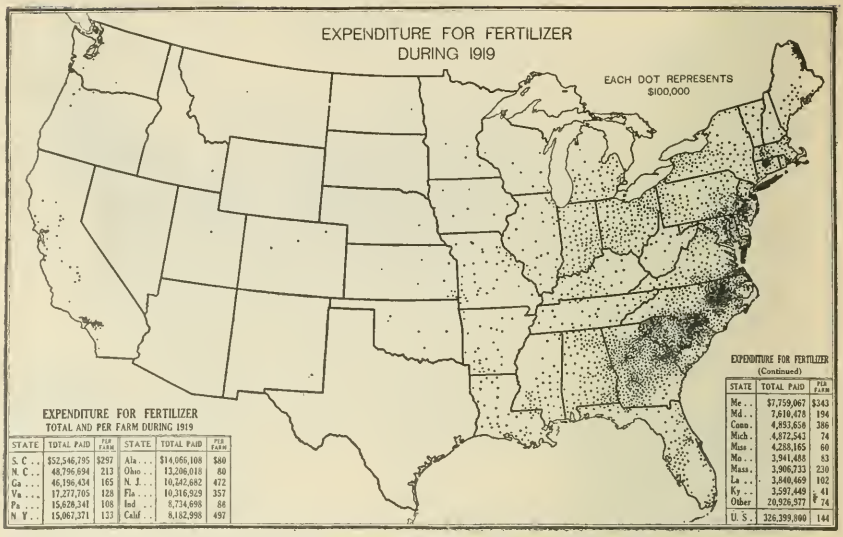
FIG. 107.—The Corn Belt contains one-fourth of the value of all live stock in the United States, or somewhat more than the entire western half of the country. There is also dense distribution in southern Wisconsin and Michigan, in New York, and in southeastern Pennsylvania, in which districts dairying is very important. The greatest average value per farm, over $3,000, is in the Arid Intermountain and the Great Plains regions; the smallest, $583, in the Cotton Belt. However, the proportion which value of live stock constitutes of the total farm investment is 12 per cent in the Cotton Belt, as compared with 8 per cent in the Corn Belt. The greatest proportion, 18 per cent, is found in the Rocky Mountain and Arid Intermountain regions.



STATE	TOTAL PAID	PER FARM	STATE	TOTAL PAID	PER FARM
N. Y.	$82,966,321	$524	Nebr.	$58,623,746	$703
Iowa	79,068,535	536	Kans.	57,514,522	489
Ill.	64,528,040	408	Pa.	51,678,017	330
Tex.	60,762,884	282	Calif.	46,380,569	596
Mo.	60,177,516	365	Ind.	42,206,030	325

STATE	TOTAL PAID	PER FARM
Minn.	$40,379,027	$256
Ohio	39,372,148	265
Wis.	37,919,456	228
Mass.	22,940,460	229
Mich.	21,938,870	197
Wash.	20,721,880	486
Kans.	20,272,851	728
Mont.	18,791,834	922
Colo.	14,698,975	511
Ark.	13,725,488	140
Ky.	10,918,488	134
Other	230,344,780	253
U. S.	1,097,462,187	313

FIG. 108.—The expenditure for feed is greatest in the Hay and Pasture Region, where dairying dominates and the production of grain is deficient, and in the Corn Belt, where feed is freely bought and sold by the farmers, most of whom feed beef cattle and hogs. In north-central Illinois the expenditure for feed is much less because the corn is largely sold to the near-by Chicago market, and few cattle or hogs are raised. (See Figs. 28, 81, 89, and 107.) The heavier expenditure shown in the Puget Sound and Willamette Valleys is largely for feed for dairy cows, while in California the feed is bought principally for dairy cows and poultry.



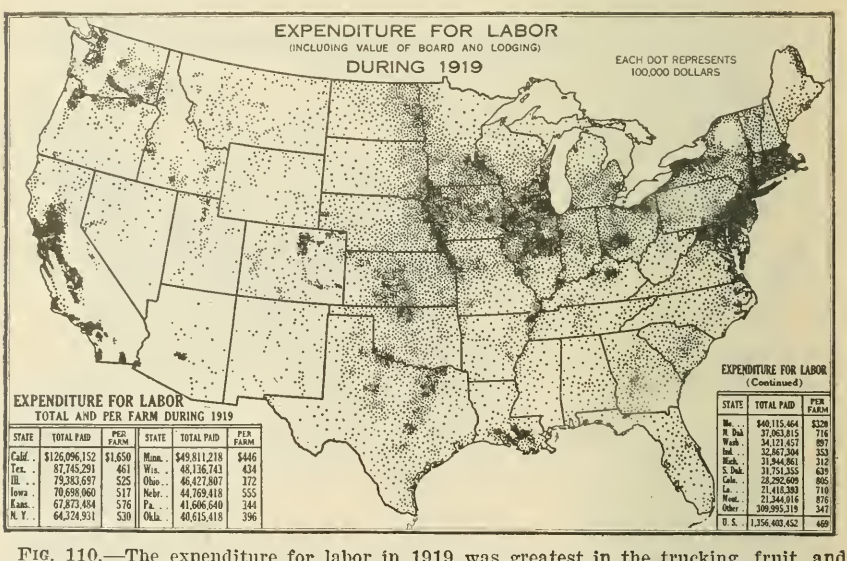
EXPENDITURE FOR FERTILIZER
TOTAL AND PER FARM DURING 1919

STATE	TOTAL PAID	PER FARM	STATE	TOTAL PAID	PER FARM
S. C.	$52,546,795	$297	Ala.	$14,055,108	$80
N. C.	48,796,694	213	Ohio	13,206,018	80
Ga.	46,196,434	165	N. J.	10,242,682	472
Va.	17,277,705	128	Fla.	10,316,929	357
Pa.	15,628,341	108	Ind.	8,734,698	86
N. Y.	15,067,371	133	Calif.	8,182,998	497

EXPENDITURE FOR FERTILIZER
(Continued)

STATE	TOTAL PAID	PER FARM
Me.	$7,759,067	$343
Md.	7,610,478	194
Conn.	4,953,858	306
Mich.	4,872,542	74
Miss.	4,288,165	60
Mo.	3,941,488	83
Mass.	3,906,733	230
La.	3,840,669	102
Ky.	3,597,449	41
Other	20,926,577	74
U. S.	326,399,890	144

FIG. 109.—Fertilizer is used at present principally on the more intensively cultivated crops, particularly cotton, tobacco, fruit, and truck, including potatoes; and almost wholly as yet in the Eastern States, where the rainfall is heavier and the soils more leached. About half of the expenditure in 1919 was in the Coastal Plain and Piedmont portions of Georgia, the Carolinas, and Virginia. Minor areas are the trucking districts of New Jersey and Long Island, the tobacco-onion district of the Connecticut Valley, the Aroostook potato district in Maine, and the fruit-trucking district in southern California. Especially significant and prophetic is the considerable expenditure shown in Ohio and Indiana and even in Illinois and Iowa.



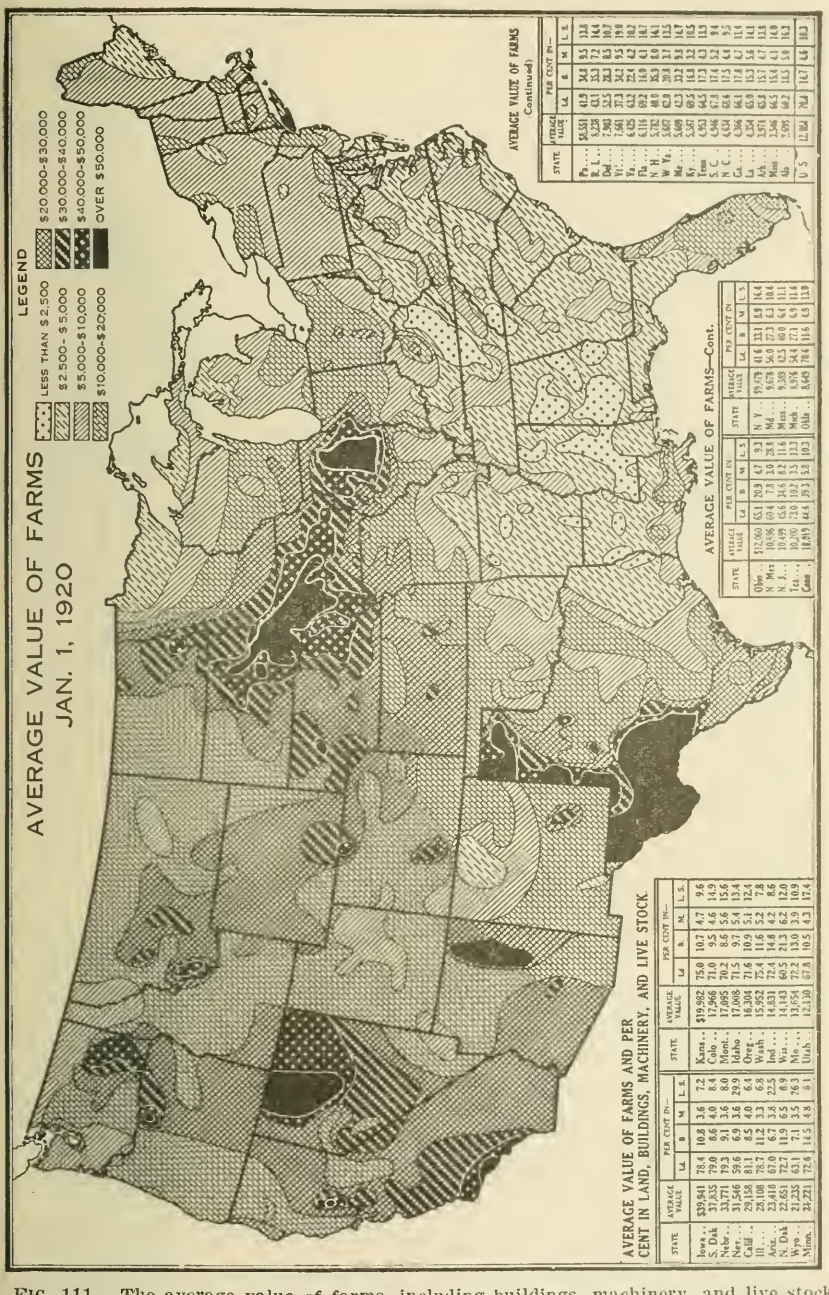
EXPENDITURE FOR LABOR
TOTAL AND PER FARM DURING 1919

STATE	TOTAL PAID	PER FARM	STATE	TOTAL PAID	PER FARM
Calif.	$126,096,152	$1,650	Minn.	$49,811,218	$446
Tex.	87,745,291	461	Wis.	48,136,743	434
Ill.	79,383,697	525	Ohio	46,421,807	372
Iowa	70,698,060	517	Nebr.	44,769,418	555
Kans.	67,873,484	576	Pa.	41,606,640	344
N. Y.	64,324,931	530	Okla.	40,615,418	396

EXPENDITURE FOR LABOR
(Continued)

STATE	TOTAL PAID	PER FARM
Me.	$40,115,464	$320
N. Dak.	37,063,815	716
Wash.	34,121,457	897
Ind.	32,867,304	353
Mich.	31,944,861	312
S. Dak.	31,751,355	639
Colo.	28,292,609	805
La.	21,418,383	710
Mont.	21,344,016	876
Other	309,995,319	347
U. S.	1,356,403,452	469

FIG. 110.—The expenditure for labor in 1919 was greatest in the trucking, fruit, and dairying areas, especially the coastal belt from Norfolk, Va., to Salem, Mass., the Ontario lowland of New York, the Elgin dairy district of northern Illinois and southern Wisconsin, and the irrigated valleys of the West. Heavy expenditure is also shown in most of the Corn Belt, and somewhat less in the Winter and Spring Wheat Areas. Although cotton is a crop requiring much more labor than any other major crop, the cash expenditure is small in the Cotton Belt because most of the labor is furnished by croppers and tenants. In the Black Prairie of Texas, however, many Mexicans are hired to pick cotton.



STATE	AVERAGE VALUE	PER CENT IN—			
		La.	B.	M.	L. S.
Iowa	$39,941	78.4	10.8	3.6	7.2
S. Dak.	37,835	79.0	8.6	4.0	8.4
Nebr.	33,771	79.3	9.1	3.6	8.0
Kans.	31,566	79.6	6.9	3.6	9.9
Okla.	29,358	81.1	6.5	3.6	8.8
Ill.	28,108	78.7	11.2	3.3	6.8
Ariz.	23,418	67.0	6.7	3.8	22.5
N. Dak.	22,651	72.7	11.9	6.5	8.9
Wyo.	21,255	63.1	7.1	3.5	26.3
Minn.	21,221	72.4	14.5	4.8	8.1

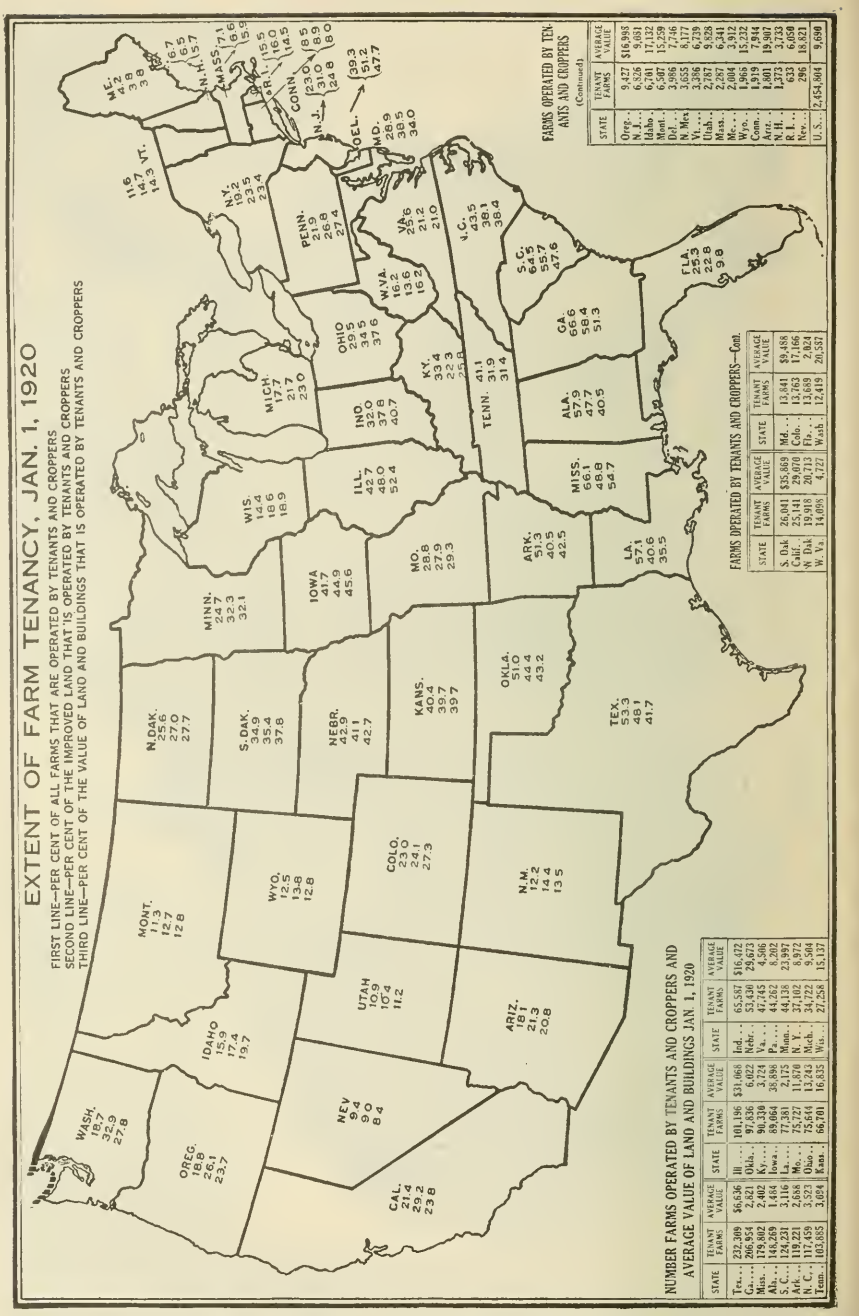
STATE	AVERAGE VALUE	PER CENT IN—			
		La.	B.	M.	L. S.
Kans.	$19,982	75.0	10.7	4.7	9.6
Colo.	17,966	71.0	9.5	4.6	14.9
Mont.	17,095	70.2	8.6	5.6	15.6
Idaho	16,908	71.5	10.9	5.4	12.2
Oreg.	16,008	71.5	10.9	5.4	12.2
Wash.	15,952	75.4	11.6	5.2	7.8
Ind.	14,831	72.4	14.8	4.2	8.6
Wis.	14,143	60.5	21.3	6.2	12.0
Mo.	13,954	72.2	13.0	3.9	10.9
Utah	12,430	67.8	10.5	4.3	17.4

STATE	AVERAGE VALUE	PER CENT IN—			
		La.	B.	M.	L. S.
Ohio	$12,860	65.1	20.9	6.7	9.3
N. Mex.	10,096	69.4	7.3	3.0	20.3
N. J.	10,099	55.6	34.6	8.2	1.6
Tex.	10,020	73.0	10.2	3.5	13.3
Conn.	10,019	44.4	45.3	5.8	10.3

STATE	AVERAGE VALUE	PER CENT IN—			
		La.	B.	M.	L. S.
N. Y.	$9,979	41.6	33.1	8.9	16.4
Md.	9,678	56.0	27.3	6.3	10.4
Mass.	9,280	42.5	40.0	6.4	11.1
Mich.	8,956	54.4	27.1	6.9	11.6
Ala.	8,640	78.4	11.6	4.5	5.5

STATE	AVERAGE VALUE	PER CENT IN—			
		La.	B.	M.	L. S.
Pa.	$8,551	41.9	34.4	9.5	13.3
R. I.	8,133	43.3	39.5	6.5	10.7
Del.	7,940	53.1	28.3	6.3	12.3
Vt.	7,661	37.3	34.2	9.5	19.0
Va.	6,625	63.2	22.4	4.2	10.2
Fla.	6,116	69.2	14.0	4.1	12.7
N. H.	5,782	48.0	35.3	8.0	8.7
W. Va.	5,607	63.1	20.4	3.7	12.8
Ky.	5,587	69.5	14.2	3.2	13.1
Tenn.	4,953	64.5	17.3	4.3	13.9
S. C.	4,636	67.3	17.4	5.2	9.4
N. C.	4,624	68.6	17.5	4.4	9.5
Ga.	4,596	66.1	17.3	4.7	11.9
La.	3,971	63.0	15.3	4.5	17.2
Miss.	3,546	64.5	15.4	4.1	14.0
Ala.	3,095	64.2	18.5	5.0	16.3
U. S.	12,084	70.1	14.7	4.6	10.3

FIG. 111.—The average value of farms, including buildings, machinery, and live stock, in the prairie portion of the Corn Belt and the southern part of the Spring Wheat Region is about $40,000. The high values shown in western Texas and northern Nevada are mostly of cattle ranches, which are few in number and large in area, often including thousands of acres of arid range. In central and southern California, on the other hand, many of the high-priced farms are small, but consist of expensive orchards, or of bean or sugar-beet land. The very low-priced farms shown in the eastern Cotton Belt are, in large part, small cropper or tenant holdings in plantations. The light areas in Kentucky and Tennessee represent poor mountain farms.



STATE	TENANT FARMS	AVERAGE VALUE
Tex.	232,309	$6,636
Ga.	206,954	2,821
Miss.	179,802	2,402
Ala.	148,269	1,484
S.C.	124,231	3,116
N.C.	119,251	2,686
Tenn.	103,855	3,084
Ill.	101,196	$31,065
Okla.	97,536	6,022
Ky.	90,330	3,724
Iowa	89,064	39,896
La.	77,381	2,175
Mo.	75,727	11,970
Ark.	73,564	3,580
Kans.	66,701	16,835
Ind.	65,587	$16,672
Nebr.	53,430	25,673
Va.	47,745	4,506
Pa.	44,282	8,202
Minn.	44,138	23,997
N. Y.	37,102	9,972
Mich.	31,536	11,814
Wis.	27,258	15,137
Md.	13,041	$9,488
Colo.	13,163	17,166
Idaho	12,419	20,537
Wash.	4,727	
W. Va.	14,095	
S. Dak.	26,041	$35,869
Calif.	25,141	29,010
Oreg.	9,427	$16,903
N.J.	6,525	9,681
Idaho	6,741	17,132
Mont.	6,507	15,259
Del.	3,998	7,746
N. Mex.	3,655	8,117
Nev.	1,586	9,220
Utah	2,787	9,525
Mass.	2,257	6,341
Me.	2,004	3,912
Wyo.	1,965	15,232
Conn.	1,919	7,944
R.I.	1,071	13,310
N.H.	1,273	7,283
R.I.	633	6,050
Nev.	296	18,821
U.S.	2,454,904	9,690

FIG. 112.—The extent of farm tenancy is commonly measured by the proportion of farmers who are tenants; but often of equal significance is the proportion of the improved land, or the proportion of the value of land and buildings included in their farms. In Illinois, for instance, less than 43 per cent of the farmers are tenants, but these tenants operate 48 per cent of the improved land, and their farms include over 52 per cent of the value of land and buildings in the State. In Alabama, on the other hand, nearly 58 per cent of the farmers are tenants, but the tenants operate only about the same proportion of improved land as the tenants in Illinois, and their farms include only about 40 per cent of the value of land and buildings.

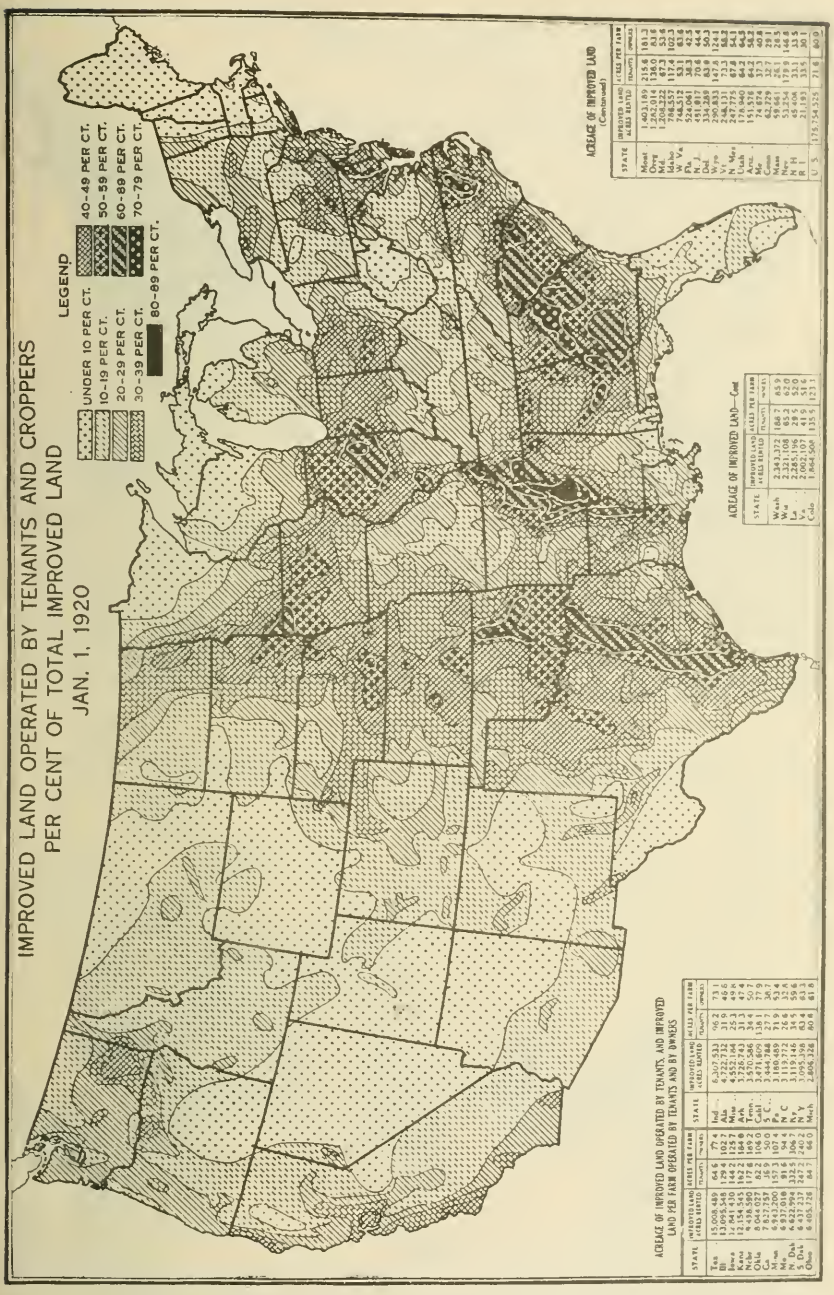


FIG. 113.—This map shows the relative extent of tenancy from the standpoint of improved land. The principal areas having over 60 per cent of the improved land operated by tenants are the richest portions of the Corn Belt and of the Cotton Belt (see Figs. 22 and 24). These are our most productive areas (see Fig. 21), in which many of the farmers or planters can afford to retire to town and be supported by the rent of their farms. The small proportion of improved land operated by tenants in the hills of New England, in the southern Appalachian Mountains, on the sandy lower coastal plain of the South, and in the arid areas of the West is noteworthy.

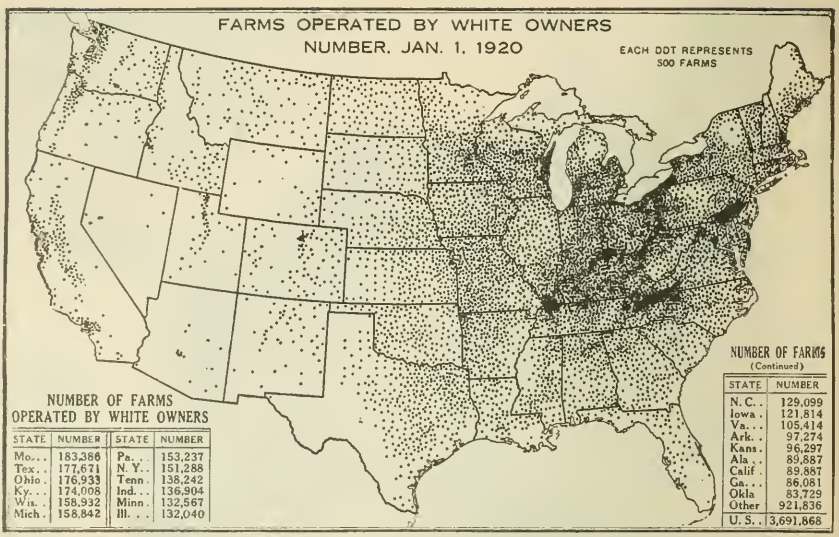


FIG. 114.—The largest number of farms operated by white owners is found among the Germans of southeastern Pennsylvania and eastern Wisconsin, the mountaineers of western Pennsylvania and the southern Appalachians, and the pioneers in the West. The fewer number of farm owner-operators in the prairie portion of the Corn Belt, as compared with the originally forested portion (see Fig. 7), is noteworthy. This is due, in part, to the larger, consequently fewer, farms (see Fig. 102), and in part to the larger proportion of tenants (see Fig. 112). The thinner distribution in northern New England, the upper Lakes region, and the West is owing to fewer farms and not to a smaller proportion of farms operated by owners (see Fig. 113).

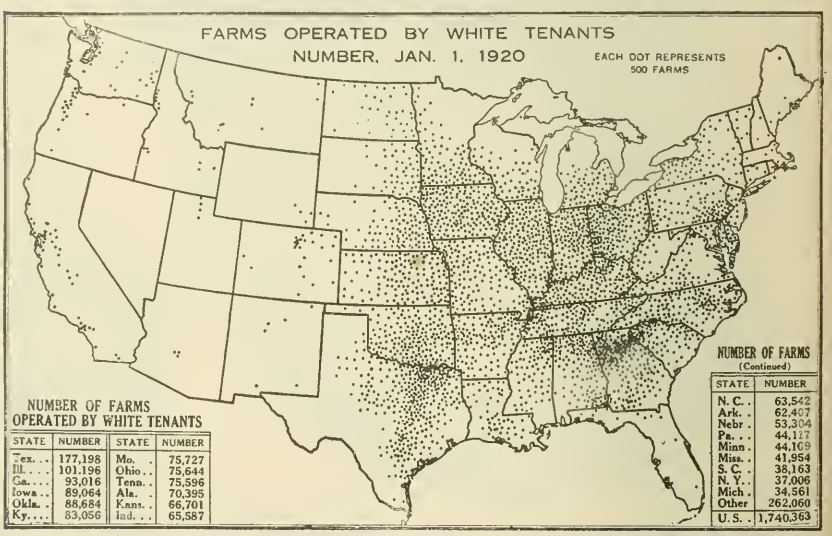


FIG. 115.—The largest number of farms operated by white tenants is in the upper Piedmont of the Carolinas, Georgia, and Alabama, and in the Black Waxy Prairie of Texas. In these districts negroes are less numerous than to the South and East, and the cotton is grown mostly by white farmers. The proportion of tenancy is about the same as in central Illinois. A large number of white tenants are shown in Kentucky and western Ohio, especially in the tobacco districts, and throughout the Corn Belt. The small number of tenants, as compared with owners (Fig. 114), is notable in the Hay and Pasture Region and in the West.

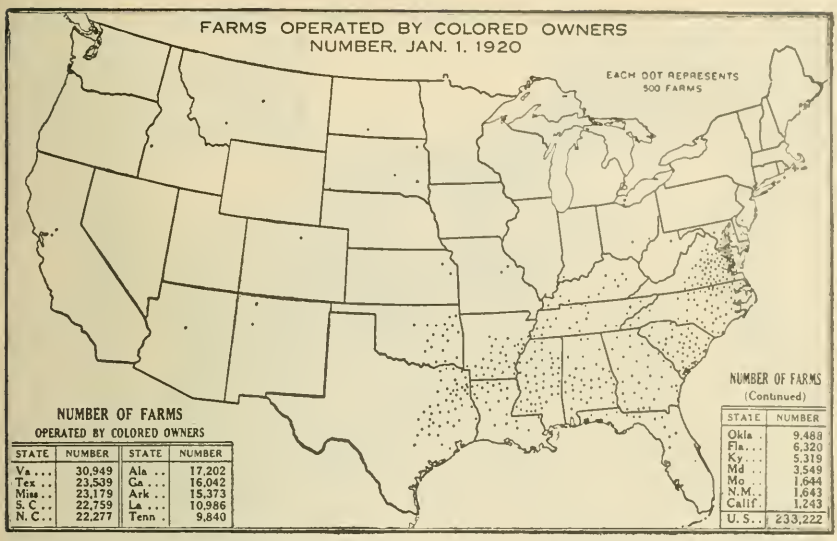


FIG. 116.—The largest number of farms operated by negro owners is found in eastern Virginia, southeastern South Carolina, and northeastern Texas, all areas of cheap land. In Virginia there are almost twice as many farms operated by negro owners as by negro tenants, and in Florida the numbers are about equal, but in the Cotton Belt tenants greatly exceed owners in number (see Fig. 117). Of the 233,222 farms in the United States operated by negro and non-white owners, only 9,153 are in the North and West. However, 71 per cent of the negro and non-white farmers in the North and West own their farms, as compared with 24 per cent in the South. The dots in the western States represent mostly farms owned and operated by Indians, Chinese, and Japanese.

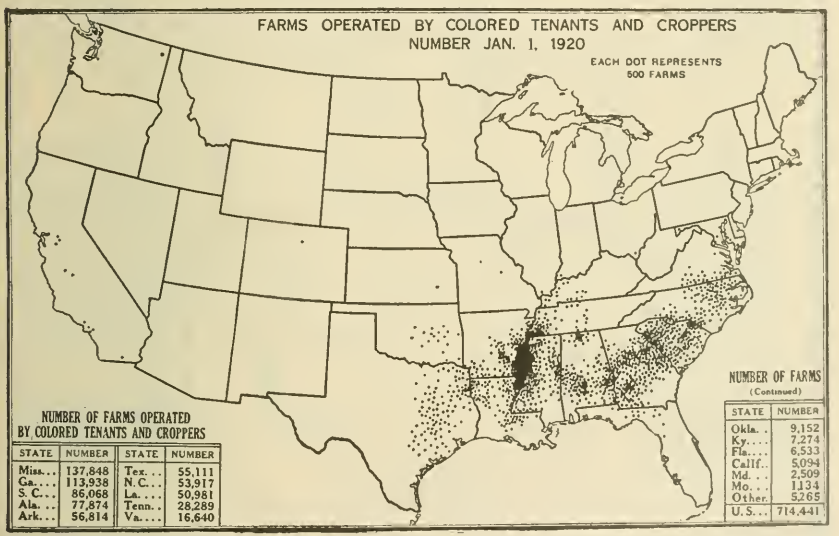
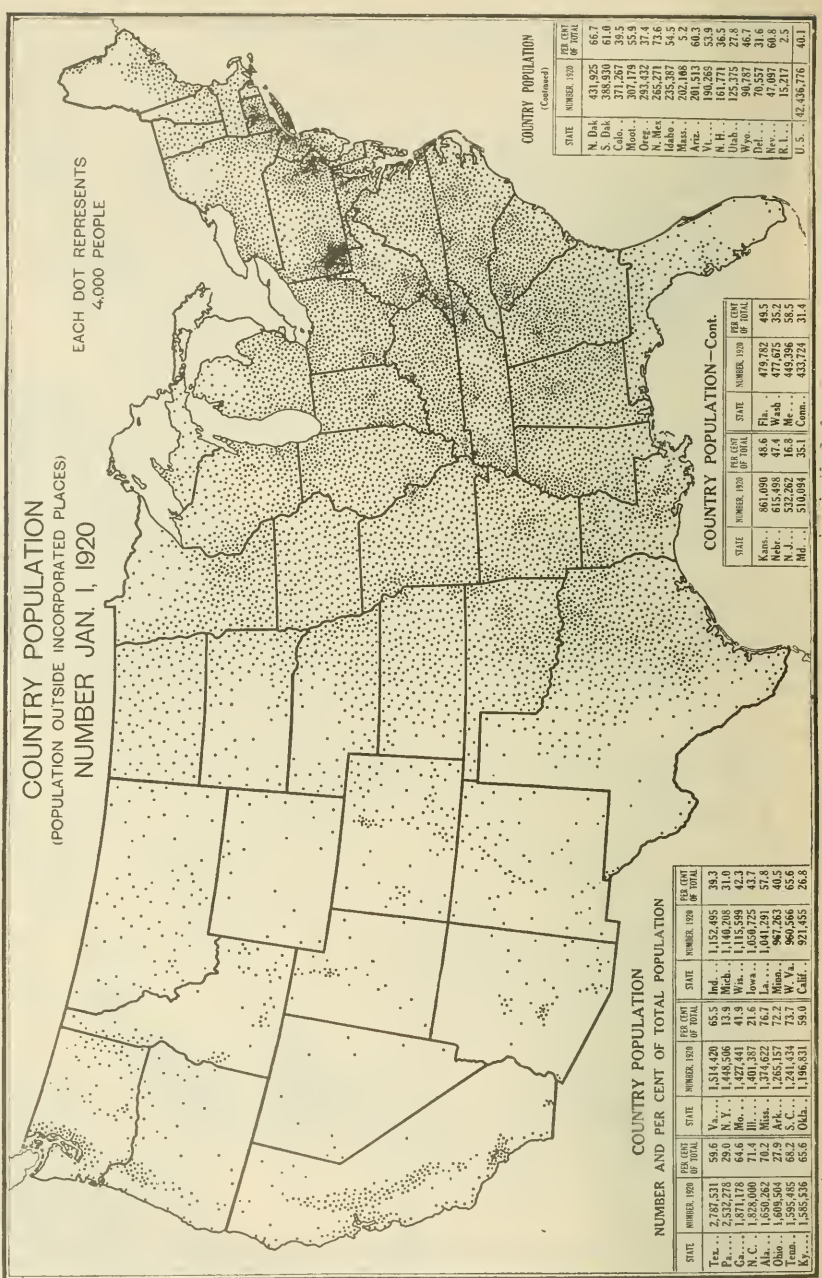


FIG. 117.—The negro tenant and cropper farms or holdings are located mostly in the Yazoo-Mississippi Delta, in the Black Prairie of Alabama, and in the upper Coastal Plain and Piedmont of Georgia and the Californias—districts having the richest soils in the old South. Many of these "farms" are merely allotments to croppers on plantations, the owner of the plantation furnishing the "cropper" with his mule, his farm implements, and sometimes, even, with food, until the crop is "made" in the fall and the proceeds divided between them. Negro tenants are much fewer in Texas because of historical reasons. The dots shown in California represent mostly Japanese and Chinese tenant farmers.

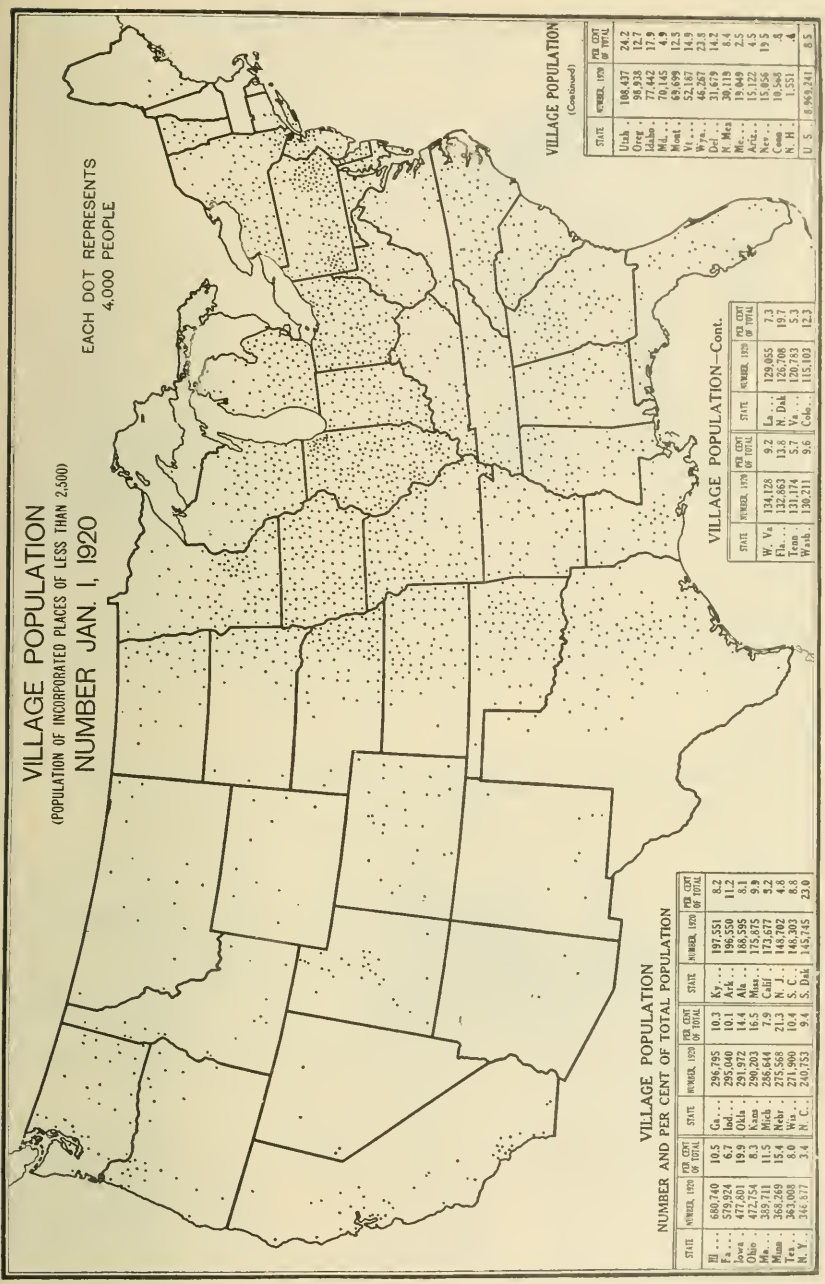


STATE	NUMBER, 1920	PER CENT OF TOTAL	STATE	NUMBER, 1920	PER CENT OF TOTAL	STATE	NUMBER, 1920	PER CENT OF TOTAL
Tex.	2,787,531	59.6	Va.	1,514,420	65.5	Ind.	1,152,495	39.3
Pa.	2,532,278	29.0	N.Y.	1,448,506	13.9	Mich.	1,140,208	31.0
Ga.	1,871,178	64.6	Mo.	1,427,441	41.9	Wis.	1,115,589	42.3
N.C.	1,828,000	71.4	Ill.	1,401,387	21.6	Iowa	1,050,725	43.7
Ala.	1,650,262	70.2	Miss.	1,374,622	76.7	La.	1,041,291	57.8
Ohio	1,609,364	27.9	Ark.	1,265,157	72.2	Minn.	967,263	40.5
Tenn.	1,595,455	68.2	S.C.	1,241,434	73.7	W.Va.	960,566	65.6
Ky.	1,585,536	65.6	Okla.	1,196,631	59.0	Calif.	921,455	26.8

STATE	NUMBER, 1920	PER CENT OF TOTAL	STATE	NUMBER, 1920	PER CENT OF TOTAL
Kans.	861,090	48.6	Fla.	479,782	49.5
Nebr.	615,498	47.4	Wash.	477,075	55.2
N.J.	615,296	38.5	Ky.	446,706	34.5
Md.	510,094	35.1	Conn.	433,724	31.4

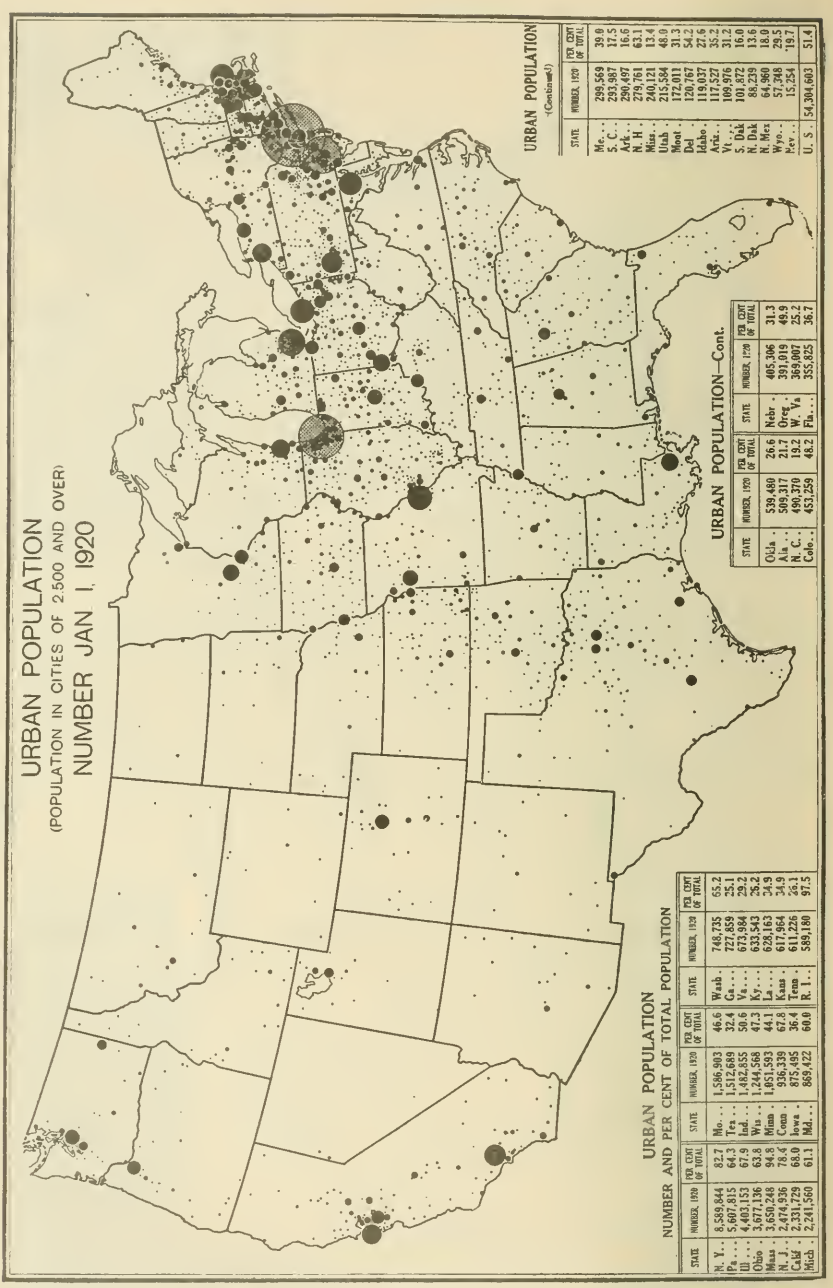
STATE	NUMBER, 1920	PER CENT OF TOTAL
N. Dak.	431,925	66.7
S. Dak.	384,930	67.0
Colo.	371,267	39.5
Mont.	307,179	55.9
Oreg.	293,432	37.4
N. Mex.	265,271	73.6
Idaho	235,387	54.5
Mass.	202,198	5.2
Ariz.	201,513	60.3
Vt.	190,265	53.9
N.H.	161,771	36.5
Utah	125,315	27.8
Wyo.	98,737	46.7
Del.	70,557	31.6
Nev.	47,097	60.8
R.I.	15,217	2.5
U.S.	42,436,776	40.1

FIG. 118.—Statistics of population outside incorporated places, although including many suburbanites, mill workers, and miners, especially in Pennsylvania, afforded the closest approximation to farm population prior to June, 1922. In the 1920 census the enumerators indicated for the first time persons living on farms. The resulting tabulation shows 31,614,000 people, or about three-fourths those living outside incorporated places. However, a map of farm population showing distribution by counties, like the map above, could not be prepared, as the statistics were tabulated only by States. Figure 97, showing number of farms, may be used to compare the relative density of farm population in different parts of the United States, since the number of people per farm ranges from four to five in most States, except in the South, where there are five to six.



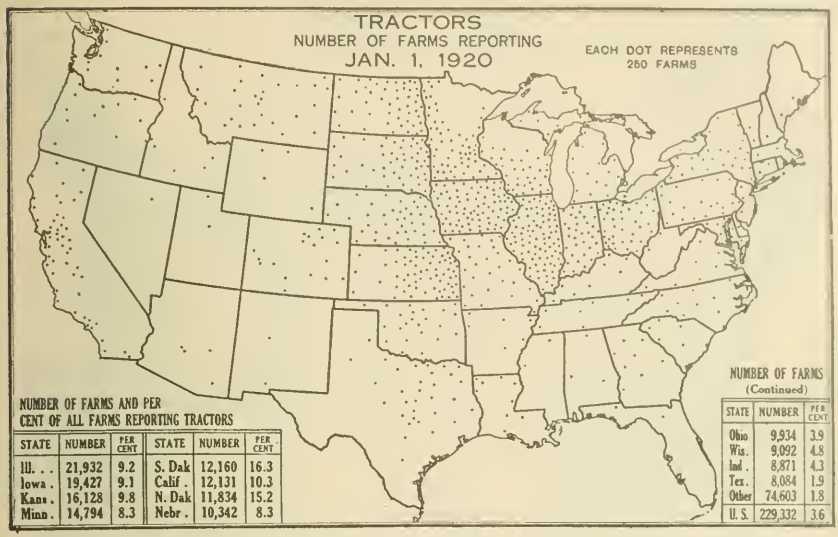
STATE	NUMBER, 1920	PER CENT OF TOTAL	STATE	NUMBER, 1920	PER CENT OF TOTAL
Ill.	680,740	10.5	Ga.	296,795	10.3
Pa.	579,924	6.7	Ind.	295,040	10.1
Iowa	477,801	19.9	Okla.	291,972	14.4
Ohio	472,754	8.3	Kans.	290,203	16.5
Mo.	389,711	11.5	Mich.	286,644	7.9
Minn.	368,269	15.4	Nebr.	275,568	21.3
Tex.	363,008	8.0	Wis.	271,900	10.4
N. Y.	346,817	3.4	N. C.	240,753	9.4
Ky.	197,551	8.2	Utah	108,437	24.2
Ark.	196,550	11.2	Oreg.	98,938	12.7
Ala.	188,595	8.1	Idaho	77,442	17.9
Miss.	175,875	9.9	Mont.	70,145	9.9
Calif.	173,677	5.2	W. Va.	62,989	6.1
N. J.	148,702	4.8	Wyo.	52,117	14.8
S. C.	146,303	8.8	Wash.	46,267	23.8
S. Dak.	145,745	23.0	Del.	31,679	14.2
W. Va.	134,128	9.2	N. Mex.	30,119	8.4
Fla.	132,863	13.8	Ariz.	19,949	2.5
Tenn.	131,174	5.7	Nev.	15,122	4.5
Wash.	130,211	9.6	Conn.	15,656	19.5
La.	129,055	7.3	N. H.	10,548	.4
N. Dak.	126,708	19.7	U. S.	1,551	.4
Colo.	120,783	5.3		115,103	12.3
				8,969,241	8.5

FIG. 119.—"Village" population includes many people living on farms within the village limits. It includes also many retired farmers, especially in the Corn Belt and in the South and West, and tradesmen who serve the farmers' needs. In the Northeast a considerable factory population resides in villages. The geographic distribution of village population in the Corn Belt, and in the Spring Wheat and the southwestern portion of the Hay and Pasture regions, is remarkably uniform. Whereas, farm population and country population (see Figs. 97 and 118) are densest in the South and East, village population is densest in the Corn Belt. It is also relatively dense in Utah, where many of the Morman farmers live in villages.



STATE	NUMBER, 1920	PER CENT OF TOTAL
N. Y.	8,589,844	82.7
Pa.	5,607,815	64.3
Ill.	3,701,853	61.8
Ohio	3,677,136	63.8
Mass.	3,650,248	94.8
N. J.	2,474,936	78.4
Calif.	2,331,729	68.0
Mich.	2,241,560	61.1
Mo.	1,596,903	46.6
Tex.	1,387,125	32.4
Ind.	1,262,855	50.6
Wis.	1,244,568	47.3
Minn.	1,051,593	44.1
Conn.	936,339	67.8
Iowa	875,495	36.4
Md.	869,422	60.0
Wash.	748,735	65.2
Ga.	727,859	25.1
Va.	673,984	29.2
Ky.	633,543	25.2
La.	628,163	34.9
Kans.	617,964	34.9
Tenn.	611,226	26.1
R. I.	589,180	97.5
Okla.	539,480	26.6
Ala.	503,317	21.7
N. C.	490,370	19.2
Colo.	453,259	48.2
Nebr.	405,306	31.3
Oreg.	391,019	49.9
W. Va.	369,007	25.2
Fla.	355,825	36.7
Me.	299,569	39.0
S. C.	293,987	17.5
Ark.	290,497	16.6
N. H.	279,761	63.1
Miss.	240,121	13.4
Utah	215,584	48.0
Mont.	172,011	31.3
Del.	120,037	27.2
Idaho	118,194	35.2
Ariz.	117,527	31.2
Vt.	109,976	63.1
S. Dak.	101,872	16.0
N. Dak.	85,239	13.6
N. Mex.	64,960	18.0
Wyo.	57,248	29.5
Nev.	15,254	19.7
U. S.	54,304,603	51.4

Fig. 120.—Over half of the urban population in the United States resides within the Hay and Pasture Region. The urban population in this region constitutes nearly three-fourths of its total population, and over-one-fourth of the total population of the United States. Into this region the food and fibers of the West and South constantly move. The center of urban population, however, is located in the eastern portion of the Corn Belt, near Piqua, Ohio; while the center of agricultural production is over 400 miles to the west, near Jefferson City, Mo. Outside this Hay and Pasture Region the principal centers of urban population are found along the northern margin of the Corn and Winter Wheat Region, and on or near the Pacific coast. Towns of 2,500 to 10,000 population are shown by the smaller size dot; larger cities by circles of varying size.



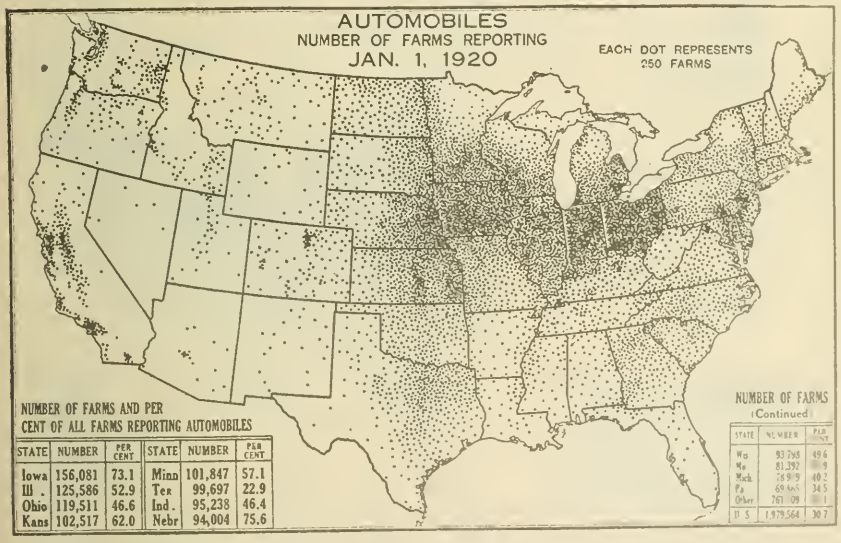
NUMBER OF FARMS AND PER CENT OF ALL FARMS REPORTING TRACTORS

STATE	NUMBER	PER CENT	STATE	NUMBER	PER CENT
Ill. .	21,932	9.2	S. Dak	12,160	16.3
Iowa .	19,427	9.1	Calif .	12,131	10.3
Kans .	16,128	9.8	N. Dak	11,834	15.2
Minn .	14,794	8.3	Nebr .	10,342	8.3

NUMBER OF FARMS (Continued)

STATE	NUMBER	PER CENT.
Ohio	9,934	3.9
Wis.	9,092	4.8
Ind .	8,871	4.3
Tex .	8,084	1.9
Other	74,603	1.8
U. S.	229,332	3.6

FIG. 121.—Tractors are most numerous in the Corn Belt, in the Spring and Winter Wheat Areas, and in California. In the Spring Wheat Area, on January 1, 1920, about 1 farm in 6 had a tractor; in the Corn Belt, in Kansas, and in California about 1 farm in 10; elsewhere in the United States 1 farm in 20 to 50, except in the States south of the Ohio and Potomac Rivers, where less than 1 farm in 100 had a tractor. The acreage of cotton a farmer can handle is not limited by the acreage he can plow and plant, as with wheat, or can cultivate, as with corn, but by the amount he can pick, and a tractor can not help in picking cotton.



NUMBER OF FARMS AND PER CENT OF ALL FARMS REPORTING AUTOMOBILES

STATE	NUMBER	PER CENT	STATE	NUMBER	PER CENT
Iowa	156,081	73.1	Minn	101,847	57.1
Ill .	125,586	52.9	Tex	99,697	22.9
Ohio	119,511	46.6	Ind .	95,238	46.4
Kans	102,517	62.0	Nebr	94,004	75.6

NUMBER OF FARMS (Continued)

STATE	NUMBER	PER CENT
Wis	93,798	49.6
Mo	81,392	9
Mich	76,919	40.2
Pa	69,665	34.5
Other	761,109	10.1
U. S	1,979,564	30.7

FIG. 122.—Two-fifths of the 2,000,000 automobiles on farms in the United States, January 1, 1920, were in the Corn Belt (see Fig. 104). From one-half in the eastern portion to three-fourths of the farms in the western portion of the Corn Belt had automobiles, and about half the farms in Wisconsin, Minnesota, the Dakotas, and California. Eastward from the Corn Belt the proportion drops to one-third of the farms in New York and one-fourth in New England; southward it drops to one-seventh in the Carolinas and Georgia and to one-twentieth in Mississippi. An automobile is of little help to a negro cropper, or even a poor white tenant in the South, either in marketing his cotton or in attending to his business.

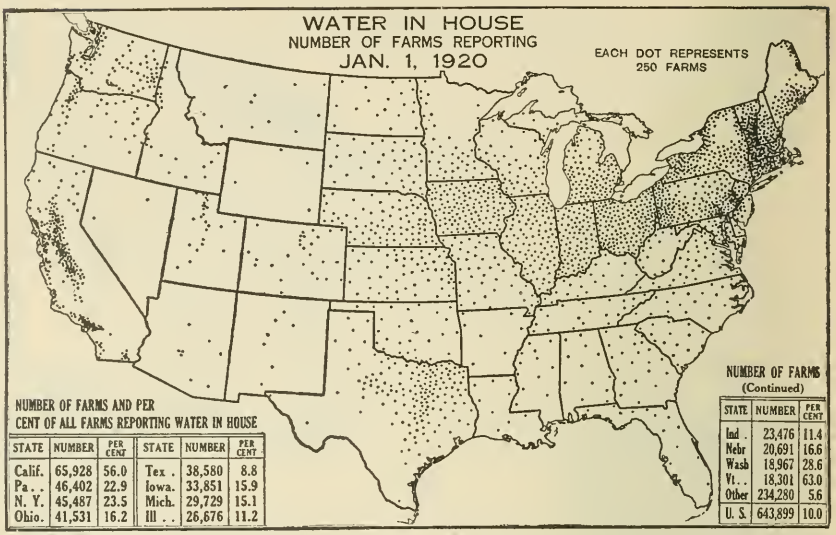


FIG. 123.—About one-half of the farms in New England and in California have water piped into the house, about one-fourth of the farms in New York, Pennsylvania, Oregon, and Washington; about one-eighth of the farms in the Corn Belt; and 1 farm in 50 to 100 in the Cotton Belt. These differences are due, in part, to differences in per capita rural wealth in the several sections of the United States, and in the percentage of tenancy, and in part to differences in the consideration shown for the health and comfort of the housewife.

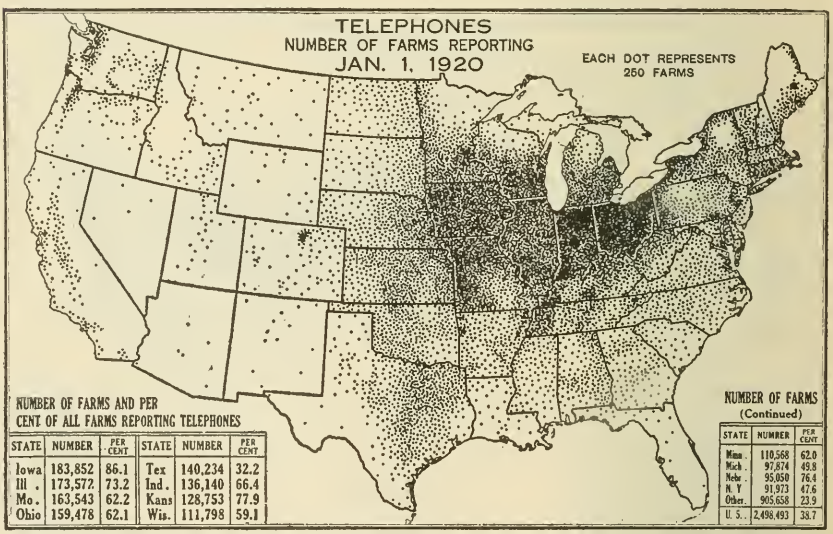


FIG. 124.—Telephones are most common on the farms of the Corn Belt and of Kansas, in which region from 60 to 90 per cent, varying with the State, possess this convenience. In the Hay and Pasture, the Spring Wheat, and the Pacific Coast Regions about half the farms have telephones; in Texas and Oklahoma about one-third of the farms; in the Corn and Winter Wheat Region (except Kansas), in the Great Plains and the Rocky Mountain Regions about a quarter of the farms; but in the Cotton Belt, east of Texas and Oklahoma, only from 5 to 15 per cent. The proportion of the farms possessing a telephone is indicative of the general diffusion of rural progress and prosperity.

The following statistics of farm population, collected for the first time in the Census of 1920, have become available since Figure 118 and the explanatory note beneath were prepared. These statistics are so important that they are given in full.

Farm Population, by Geographic Divisions and States, 1920.

Division and State.	Total.		In cities of—			In rural territory.	
	Number.	Per cent of entire population.	25,000 or more.	10,000 to 25,000.	2,500 to 10,000.	Number.	Per cent of entire rural population.
United States	31,614,269	29.9	52,955	36,131	166,543	31,358,640	61.0
Geographic divisions:							
New England	625,877	8.5	8,132	16,790	65,533	535,422	34.9
Middle Atlantic	1,892,789	8.5	12,804	2,962	15,862	1,861,161	33.3
East North Central	4,913,633	22.9	9,279	3,094	14,056	4,887,204	58.0
West North Central	5,171,596	41.2	5,757	3,299	9,357	5,153,183	65.9
South Atlantic	6,416,698	45.9	3,273	741	14,927	6,397,757	66.3
East South Central	5,182,937	58.3	1,202	514	6,415	5,174,806	75.0
West South Central	5,228,199	51.0	1,808	1,962	13,859	5,210,570	71.7
Mountain	1,168,367	35.0	871	1,182	13,321	1,152,993	54.4
Pacific	1,014,173	18.2	9,829	5,587	13,213	985,544	47.0
New England:							
Maine	197,601	25.7	1,301	3,348	3,926	189,026	40.4
New Hampshire	76,021	17.2	818	2,751	7,845	64,607	39.6
Vermont	125,263	35.5		244	574	124,445	51.3
Massachusetts	118,554	3.1	4,229	8,269	44,324	61,732	30.5
Rhode Island	15,136	2.5	741	1,332	7,748	5,315	34.9
Connecticut	93,302	6.8	1,043	846	1,116	90,297	20.3
Middle Atlantic:							
New York	800,747	7.7	7,261	1,643	8,889	782,954	43.6
New Jersey	143,708	4.6	1,890	703	4,268	136,847	20.1
Pennsylvania	948,334	10.9	3,653	616	2,705	941,360	30.2
East North Central:							
Ohio	1,139,329	19.8	2,490	750	2,177	1,133,912	54.5
Indiana	907,295	31.0	2,511	260	1,704	902,820	62.4
Illinois	1,098,262	16.9	2,695	891	3,940	1,090,736	52.4
Michigan	848,710	23.1	1,237	408	2,566	844,499	59.2
Wisconsin	920,037	35.0	346	785	3,669	915,237	66.0
West North Central:							
Minnesota	897,181	37.6	901	518	2,302	893,460	66.9
Iowa	984,799	41.0	2,973	859	3,273	977,694	64.0
Missouri	1,211,346	35.6	1,641	306	1,500	1,207,899	66.5
North Dakota	394,500	61.0		759	119	393,622	70.5
South Dakota	362,221	56.9	35	5	295	361,886	67.7
Nebraska	584,172	45.1	131	113	1,190	582,738	65.4
Kansas	737,377	41.7	76	739	678	735,884	63.9
South Atlantic:							
Delaware	51,212	23.0	34		27	51,151	50.0
Maryland	279,225	19.3	1,391	14	164	277,656	47.9
District of Columbia	894	.2	894				
Virginia	1,064,417	46.1	190	48	4,266	1,059,913	64.8
West Virginia	477,924	32.7	286	75	932	476,631	43.5
North Carolina	1,501,227	58.7	207	237	837	1,499,946	72.5
South Carolina	1,074,693	63.8	70	103	2,041	1,072,479	77.2
Georgia	1,685,213	58.2	96	230	4,276	1,680,611	77.5
Florida	281,893	29.1	105	34	2,384	279,370	45.6
East South Central:							
Kentucky	1,304,862	54.0	100	141	2,279	1,302,342	73.0
Tennessee	1,271,708	54.4	823	183	1,523	1,269,179	73.5
Alabama	1,335,885	56.9	279	118	975	1,334,513	72.6
Mississippi	1,270,482	71.0		72	1,638	1,268,772	81.8
West South Central:							
Arkansas	1,147,049	65.5	433	472	1,662	1,144,482	78.3
Louisiana	786,050	43.7	269	32	1,294	784,455	67.0
Oklahoma	1,017,327	50.2	173	170	1,085	1,015,899	68.2
Texas	2,277,773	48.8	933	1,288	9,818	2,265,734	71.9
Mountain:							
Montana	225,667	41.1	7	45	226	225,389	59.8
Idaho	200,902	46.5		497	3,842	196,563	62.8
Wyoming	67,306	34.6		31	199	67,076	48.9
Colorado	266,073	28.3	203	86	503	265,281	54.5
New Mexico	161,446	44.8		9	895	160,542	54.3
Arizona	90,560	27.1	42	1	350	90,167	41.6
Utah	140,249	31.2	619	507	7,251	131,872	56.4
Nevada	16,164	20.9		6	55	16,103	25.9
Pacific:							
Washington	283,382	20.9	1,605	248	1,507	280,022	46.1
Oregon	214,021	27.3	200	63	1,749	212,009	54.0
California	516,770	15.1	8,024	5,276	9,957	493,513	45.1

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